Tolerance		+
cm3/1000 strokes	: 5.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 9.0	+ Rated speed rpm : 1120
		+ Rack travel in mm : 16.50 + Tolerance mm : + 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm	5.50	T FOLL LOAD DELIVERY AT FOLL LOAD STOP
Tolerance mm		Rated speed rpm : 600
Del. quantity	A / E	+ Aneroid pressure
cm3/1000 strokes Tolerance	: 16.5	+ hPa : 1300 + Del. quantity
cm3/1000 strokes	: ← 3.0	- cm3/1000 strokes : 275.5
Check tolerance		Tolerance
cm3/1000s.	: +- 6.0	cm3/1000 strokes : + 1.0
Spreed		+ Check tolerance
Tolerance cm3/1000 strokes	: 8.0	+ cm3/1000s. : + 4.0 + Spreed
Check tolerance	. 0.0	+ Tolerance
cm3/1000s.	: 12.0	- cm3/1000 strokes : 5.0
		+ Check tolerance + cm3/1000S. : 9.0
(B) SETTING OF IN WITH GOVERNOR	JECTION POMP	
GUIDE SLEEVE TRAV	EL	+ CONTROL LEVER +
	-	- control lever
Rated speed rpm guide sleeve	: 700	<pre>position degree : 52.0 tolerance degree : +- 4.0</pre>
travel mm	: 4.55	toterance degree . += 4.0
Tolerance mm		+ control lever
	4050	+ position degree : 117.0
Rated speed rpm guide sleeve	: 1050	tolerance degree : +- 4.0
travel mm	: 7.70	T RATED SPEED
Tolerance mm	: ← 0.10	† rack travel mm : 12.60
	700	Rated speed rpm : 1000
Rated speed rpm guide sleeve	: 300	† Tolerance 1/min : +- 5
travel mm	: 0.75	rack travel mm : 4.00
Tolerance mm	: +- 0.25	Rated speed rpm : 1125
Rated speed rpm	: 500	+ Tolerance 1/min : + 15
guide sleeve		rack travel mm : 0.50
travel mm Tolerance mm	: 3.45 : + 0.25	+ Tolerance mm : + 0.50 + Rated speed rpm : 1230
roterance mm	: +- 0.23	T Rated speed rpill : 1250
Rated speed rpm	: 1165	+
guide sleeve		+
travel mm	: 9.55 : + 0.25	LOW IDLE
Tolerance mm	: +- 0.25	† LOW IDLE
GUIDE SLEEVE POSI	TION	t control lever
COIDE OFFICE : OOI	1 2017	position degree : 82.0
		tolerance degree : + 4.0

control lever position degree tolerance degree		Pressure hPa rack travel mm Tolerance mm	: 500 : 0.90 : +- 0.10
Setting point w/o	out bumper spring	Start interlock	
Rated speed rpm	: 100	Rated speed rpm Rated speed rpm	
CRT mm min.	: > 9.20	Check	
Testing:		speed 1/min Check	: > 80
Rated speed rpm rack travel mm Tolerance mm	: 5.50	speed 1/min	: < 240
Rated speed rpm	: 325	+ FUEL DELIVERY CH/	ARACTERISTICS
TODOUE CONTROL		Aneroid pressure	. 1700
TORQUE CONTROL Rated speed rpm	: 600	+ hPa + Rated speed rpm	: 1300 : 950
rack travel mm		Del. quantity	. 750
Tolerance mm		cm3/100C strokes	: 245.5
Rated speed rpm		+ cm3/1000 strokes	: +- 2.0
rack travel mm	: 13.75	+ Check tolerance	
Tolerance mm	: ← 0.05	+ cm3/1000s. + Spreed	: +- 5.0
Rated speed rpm	• 750	+ Tolerance	
rack travel mm	: 14.25	+ cm3/1000 strokes	: 8.0
Tolerance mm	: + 0.05	+ Check tolerance	
Rated speed rpm	• 8/0	t cm3/1000s.	: 12.0
rack travel mm		I	
Tolerance mm		+ Aneroid pressure	
		+ hPa	: 1300
		+ Rated speed rpm	: 750
ANEROID/ALTITUDE		+ Del. quantity	
COMPENSATOR TEST		+ cm3/1000 strokes	: 267.0
		+ Tolerance + cm3/1000 strokes	: +- 2.0
SETTING		+ Check tolerance	. +- 2.0
30111110		+ cm3/1000s.	: +- 5.0
Rated speed rpm	: 500	Spreed	
Pressure hPa		+ Tolerance	
rack travel mm	: 14.25	+ cm3/1000 strokes	: 8.0
Tolerance mm	: ← 0.05	+ Check tolerance	42.0
Ondrad amand and	. 500	+ cm3/1000s.	: 12.0
Rated speed rpm Pressure hPa	: 500	I	
7.000010 17.0	•	Aneroid pressure	
MEASUREMENT		+ hPa	: -
Rated speed rpm	: 500	+ Rated speed rpm + Del. quantity	: 500
		+ cm3/1000 strokes	: 146.5
Pressure hPa	: 760	+ Tolerance	
rack travel mm	: 2.25	cm3/1000 strokes	: +- 1.0
Tolerance mm	: +- 0.15	+ Check tolerance + cm3/1000s.	: +- 4.0
		1 311137 1 2 2 2 0 1	. +.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 236.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 5.50

Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes : 16.5

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

: +- 6.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.07.97 Test oil : ISO 4113

Combination No. : 0 400 846 258

Injection pump

Pump designation : PES6A90D410RS2293Z EP type number : 0 410 896 037

Governor

Governer design. : RQV300...1425AB740L

Governer no. : 0 420 212 037

Cust. part No. :

Customer-spec. information Customer : MB-NFZ

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Tolerance : + 0.50 Check tolerance *NW : + 0.75

BASIC SETTING

Del. quantity cm3/1000 strokes : 74.5

Tolerance cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 4.5

Rated speed rpm : 300

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1375

Aneroid pressure

hPa : -

Del. quantity cm3/1000 strokes : 74.5 Tolerance cm3/1000 strokes : +- 0.5Check tolerance cm3/1000s.: +- 2.5 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 4.5 RATED SPEED 4.00 rack travel mm : rack travel mm : 4.00 LOW IDLE Setting point w/out bumper spring Rated speed rpm : 100 Testing: rack travel mm : 2.00 Start interlock 100 Rated speed rpm : > Check speed 1/min :> 80 STARTING FUEL DELIVERY Rated speed rpm : 100 LOW IDLE 300 Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22,07,97 Test oil : ISO 4113

Combination No. : 0 400 846 443

Injection pump

Pump designation : PES6A90D410RS2293Z EP type number : 0 410 896 037

Governor

Governer design. : RQV300...1400AB1066

: -1DL Governer no. : 0 420 214 251

Cust. part No. :

Customer-spec, information Customer : MB-NFZ : 0M352A Motor Power KW : 126.0

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 12.45

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 74.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance : +- 2.5 cm3/1000s.

Spreed

A07

Tolerance cm3/1000 strokes : 3.0	+ Tolerance mm : +- 1.30
Check tolerance cm3/1000s. 4.5	FULL LOAD DELIVERY AT FULL LOAD STOP
	+ Rated speed rpm : 1400
	+ Aneroid pressure
Dated aread are . 700	+ hPa : 700
Rated speed rpm : 300	+ Del. quantity + cm3/1000 strokes : 74.5
Rack travel in mm: 9.00	Tolerance
Tolerance mm : +- 0.10	cm3/1000 strokes : +- 0.5
Del. quantity	- Check tolerance
cm3/1000 strokes : 12.0	+ cm3/1000s. : + 2.5
Tolerance	+ Spreed
cm3/1000 strokes : + 3.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 3.0
cm3/1000s. : + 5.0	+ Check tolerance + cm3/1000s. : 4.5
Spreed Tolerance	t cm3/1000s. : 4.5
cm3/1000 strokes : 2.0	1
Check tolerance	
cm3/1000s. : 4.0	CONTROL LEVER
	+
4-1	+ control lever
(B) SETTING OF INJECTION PUMP	position degree : 114.0
WITH GOVERNOR	tolerance degree : +- 4.0
	T RATED SPEED
GUIDE SLEEVE TRAVEL	rack travel mm : 11.40
	+ Rated speed rpm : 1445
Rated speed rpm : 1500	+ Tolerance 1/min : +- 5
guide sleeve	+
travel mm : 8.55	rack travel mm : 4.00
Tolerance mm : +- 0.05	Rated speed rpm : 1595 Tolerance 1/min : + 15
Rated speed rpm : 300	Toterance Dmin : + 15
guide sleeve	rack travel mm : 0.50
travel mm : 1.05	+ Tolerance mm : +- 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1750
	+
Rated speed rpm : 500	+
guide sleeve	†
travel mm : 2.55 Tolerance mm : + 0.25	LOW IDLE
Tolerance mm : + 0.25	I LOW IDLE
Rated speed rpm : 750	1
guide sleeve	+ control lever
travel mm : 4.20	position degree : 76.0
Tolerance mm : + 0.10	tolerance degree : +- 4.0
	+
CLIDE CLEENE DOCUTION	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 100
	Tuesd opeca i piii . Tue
control lever	+ CRT mm min. : > 10.50
position degree : - 1	+
Rated speed rpm : 1500	+ Testing:
Rack travel in mm : 16.50	+ Rated speed rpm : 300
Rack travel in mm : 16.50	+ Rated speed rpm : 300

rack travel mm Tolerance mm	: 9.00 : +- 0.10
Rated speed rpm	: 625
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1400 : 12.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.75 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.75 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.75 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.35 : + 0.05
MEASUREMENT	
· ····································	
Rated speed rpm	: 500
	: 500 : 225 : 12.70 : ← 0.10
Rated speed rpm Pressure hPa rack travel mm	: 225 : 12.70
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 225 : 12.70 : + 0.10 : 350 : 13.25
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 225 : 12.70 : + 0.10 : 350 : 13.25

Check speed 1/min	: <	240			
FUEL DELIVERY CHA	FUEL DELIVERY CHARACTERISTICS				
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : : +- : +-	700 700 76.0 2.0 4.5	-		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : : +- : +-	500 56.0 1.0 3.0			
STARTING FUEL DEL	IVERY				
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : +- : +-	100 15.60 0.20 78.0 5.0 8.0			
LOW IDLE					
Rated speed rpm	:	300			
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +-	9.00 0.10 12.0 3.0 5.0			

Check tolerance cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 13.06.95 : ISO 4113

Combination No. : 0 400 866 194

Injection pump

Pump designation : PES6A100D320/3RS2763

EP type number : 0 410 806 006

Governor

Governer design. : RSV415...1175AOC2190

: -69R

Governer no.

: 0 420 233 308

Cust. part No. : 3921135

Customer-spec. information Customer : CDC Motor : 6 CT : 129.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1175

Rack travel in mm : 10.45

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :	99.5	control lever	• 110.0
Tolerance cm3/1000 strokes : +	- 1.0	tolerance degree	
	+	RATED SPEED	
Check tolerance cm3/1000s. : +	- 3.0	rack travel mm Rated speed rpm Tolerance 1/min	: 1245
Spreed	T		
Tolerance	I	rack travel mm Rated speed rpm	
cm3/1000 strokes :	4.0	Tolerance 1/min	
Check tolerance	I	rack travel mm	: 0.85
	6.5	Tolerance mm	
		Rated speed rpm	
	Į	rack travel mm	: 4.00
	+	Rated speed rpm	: 1315
Rack travel in mm : Tolerance mm : +		Tolerance 1/min	: + 15
(B) SETTING OF INJECT	ION PUMP		
WITH GOVERNOR	‡	LOW IDLE	
		control lever	
GUIDE SLEEVE POSITION	1	position degree	: 86.0
	1	tolerance degree	
control lever	Į	Control lever dif	ference
position degree : - Rated speed rpm :	· 3 +	Grad	: 24.0
Rated speed rpm :	800	tolerance degree	: +- 4.0
Rack travel in mm : Tolerance mm : *	0.50	Setting point w/o	ut bumper sp
OCCIDENCE IN THE	7	Rated speed rpm	: 415
	+	rack travel mm	: 4.70
ULL LOAD DELIVERY AT	FULL LOAD STOP	Tolerance mm	: ← 0.10
Rated speed rpm : Aneroid pressure	1175	Rated speed rpm	: 100
nPa :		CRT mm min.	: > 19.00
Del. quantity cm3/1000 strokes :	99.5	Testing:	
Folerance cm3/1000 strokes : +	- 1.0	Rated speed rpm	: 415
Check tolerance	+	rack travel mm	: 5.20
cm3/1000s. : +	- 3.0 +	Tolerance mm	: +- 0.10
Spreed	+		
Tolerance	†	TODOUE CONTROL	
cm3/1000 strokes : Check tolerance	4.0	TORQUE CONTROL	: 1175
.neck tolerance cm3/1000s. :	6.5	Rated speed rpm rack travel mm	: 1175 : 10.45
m3/10003.	I	Tolerance mm	: +- 0.05
	+		
CONTROL LEVER		Rated speed rpm rack travel mm	: 800 : 10.80
COLLINGE EFACIL	Т	FOR CLOVE CHAIL	. 10.00

4.00 1310 ← 5 0.85 **←** 0.55 1400 4.00 1315 ├ 15 86.0 ← 4.0 ence 24.0 - 4.0 oumper spring 415 4.70 ← 0.10 100 > 19.00 415 5.20 ⊢ 0.10 1175 10.45 **-** 0.05 800 10.80

Tolerance mm : \leftarrow 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 103.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rack travel in mm : 5.20 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 773

Injection pump

Pump designation : PES6P100A320LS3342

EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A595

Governer no. : 0 421 833 461

Cust. part No. : 1824625C91

Customer-spec. information Customer : NAVISTAR Motor : DT-530

Power KW : 168.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 13.25

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 146.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 8.0 Check tolerance	Check tolerance cm3/1000s. : 12.0
cm3/1000s. : 12.0	
	CONTROL LEVER
Bab all array I array (45	control lever
Rated speed rpm : 415	position degree : 106.0 tolerance degree : +- 6.0
Rack travel in mm: 5.50	toterance degree
Tolerance mm : + 0.10	RATED SPEED
Del. quantity	rack travel mm : 12.20
cm3/1000 strokes : 24.5	Rated speed rpm : 1150
Tolerance cm3/1000 strokes : +- 2.0 +-	Tolerance 1/min : +- 5 Check
Check tolerance	speed 1/min : +- 10
cm3/1000s. : +- 4.5	
Spreed	rack travel mm : 4.00
Tolerance	Rated speed rpm : 1200
cm3/1000 strokes : 4.0 +	Tolerance 1/min : +- 5 Check
cm3/1000s. : 6.5	speed 1/min : +- 10
+	
 	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 1300
WITH GOVERNOR	Rated speed rpm : 1300
1	rack travel mm : 4.00
	Rated speed rpm : 1205
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 5
†	Check speed 1/min : +- 10
control lever	speed 1/min : +- 10
position degree : -3	
Rated speed rpm : 800	
81	LOUTE
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	LOW IDLE
Total alloc linit	
governor spring	control lever
pre-tension +	position degree : 79.0
click setting x : 3.00	tolerance degree : +- 6.0
	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	
†	Rated speed rpm : 100
Rated speed rpm : 1100	CDT > 10.00
Aneroid pressure + hPa : 1200 +	CRT mm min. : > 19.00
Del. quantity	Testing:
cm3/1000 strokes : 146.5	_
Tolerance	Rated speed rpm : 415
cm3/1000 strokes : +- 1.0 +- Check tolerance +-	rack travel mm : 5.50 Tolerance mm : +- 0.10
cm3/1000s. : +- 3.0	rocer arice min ; T= 0.10
Spreed	
Tolerance +	TORQUE CONTROL
cm3/1000 strokes : 8.0	Rated speed rpm : 1100
†	rack travel mm : 13.25

Tolerance mm	: +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.20 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.20 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.90 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 590 : 12.80 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 270 : 10.20 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 800
Del. quantity cm3/1000 strokes Tolerance	: 172.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
Aneroid pressure	
hPa Rated speed rpm	: – : 500
Del. quantity cm3/1000 strokes	: 78.5
Tolerance cm3/1000 strokes	: +- 2.0

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 25.0

LOW IDLE				
Rated speed rpm	:		415	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed	:	+-	5.50 0.10 24.5 2.0 4.5	
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:		4.0 6.5	

End of test specification sheet

Check tolerance

cm3/1000s. : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22,07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 774

Injection pump

Pump designation : PES6P100A320LS3342 EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A596

Governer no. : 0 421 833 462

Cust. part No. : 1824624091

Customer-spec. information Customer : NAVISTAR : DT-530 Motor Power KW : 187.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.60 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 8.0	theck tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	İ
	CONTROL LEVER
Rated speed rpm : 415	<pre>+ control lever + position degree : 108.0 + tolerance degree : +- 6.0</pre>
Rack travel in mm : 5.50	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 24.5	rack travel mm: : 11.60 Rated speed rpm : 1150
cm3/1000 strokes : 24.5 Tolerance	Rated speed rpm : 1150 Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	+ Check
Check tolerance	+ speed 1/min : +- 10
cm3/1000s. : +- 4.5	+
Spreed	† rack travel mm : 4.00
Tolerance	+ Rated speed rpm : 1200
cm3/1000 strokes : 4.0 Check tolerance	+ Tolerance 1/min : +- 5 + Check
cm3/1000s. : 6.5	speed 1/min : +- 10
	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	+ Tolerance mm : + 0.55
WITH GOVERNOR	+ Rated speed rpm : 1300
	+
	rack travel mm : 4.00
GUIDE SLEEVE POSITION	Rated speed rpm : 1205 + Tolerance 1/min : + 5
GOIDE SLEEVE POSITION	+ Check
	+ speed 1/min : +- 10
control lever position degree : - 3 Rated speed rpm : 800	
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	LOW IDLE
governor spring	T control lever
pre-tension	+ position degree : 80.0
click setting x : 3.50	tolerance degree : +- 6.0
4	+ Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100	+
Aneroid pressure hPa : 1200	+ CRT mm min. : > 19.00
Del. quantity	† Testing:
cm3/1000 strokes : 130.0	Poted around the 1/15
Tolerance cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 415 + rack travel mm : 5.50
Check tolerance	Tolerance mm : +- 0.10
cm3/1000s. : +- 3.0	+
Spreed	
Tolerance	+ TORQUE CONTROL
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1100 + rack travel mm : 12.60

Tolerance mm : +- 0.05 Rated speed rpm : 800 rack travel mm : 13.50 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 800 Rated speed rpm : 1200 Pressure hPa 13.50 rack travel mm : : +- 0.20 Tolerance mm Rated speed rpm : 500 Pressure hPa 8.80 rack travel mm : : +- 0.20 Tolerance mm **MEASUREMENT** Rated speed rpm : 800 585 Pressure hPa 12.40 rack travel mm : +- 0.20 Tolerance mm Pressure hPa : 290 rack travel mm : 10.00 : **←** 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 hPa 800 Rated speed rpm : Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.0 Aneroid pressure hPa

500

: +- 4.0

STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 21.00 : **←** 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rated speed rpm : 415 Rack travel in mm : 5.50 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance

End of test specification sheet

:

6.5

cm3/1000s.

Tolerance

Rated speed rpm
Del. quantity

Check tolerance cm3/1000s.

cm3/1000 strokes : 77.5

 $c_{3}/1000 \text{ strokes} : +- 2.0$

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 775

Injection pump

Pump designation : PES6P100A320LS3342 EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A597

Governer no. : 0 421 833 463

Cust. part No. : 1874626091

Customer-spec. information
Customer : NAVISTAR
Motor : DT-530
Power KW : 153.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.55
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 8.0 Check tolerance	Check tolerance cm3/1000s. : 12.0
cm3/1000s. : 12.0	
	CONTROL LEVER
1 (45	control lever
Rated speed rpm : 415	position degree : 107.5 tolerance degree : +- 6.0
Rack travel in mm: 5.60	DATED ODEED
Tolerance mm : + 0.10 + Del. quantity +	RATED SPEED rack travel mm : 11.50
cm3/1000 strokes : 24.5	Rated speed rpm : 1150
Tolerance + 2.0 +	Tolerance 1/min : +- 5 Check
Check tolerance	speed 1/min : + 10
cm3/1000s. : +- 4.5	
Spreed +	rack travel mm : 4.00 Rated speed rpm : 1200
cm3/1000 strokes : 4.0	Tolerance 1/min : +- 5
Check tolerance + cm3/1000s. : 6.5	Check speed 1/min : +- 10
	speed 1/min : +- 10
	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 1300
WITH GOVERNOR	•
+	rack travel mm : 4.00
GUIDE SLEEVE POSITION	Rated speed rpm : 1205 Tolerance 1/min : + 5
	Check
control lever	speed 1/min : +- 10
position degree : -3	
Rated speed rpm : 800	
Rack travel in mm: 0.50 Tolerance mm: + 0.20	LOW IDLE
governor spring	control lever
pre-tension +	position degree : 78.5
click setting x : 3.50	tolerance degree : +- 6.0
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
Rated speed rpm : 1100	Rated speed rpm : 100
Rated speed rpm : 1100 +	CRT mm min. : > 19.00
hPa : 1200	
Del. quantity + cm3/1000 strokes : 128.0 +	Testing:
Tolerance	Rated speed rpm : 415
cm3/1000 strokes : +- 1.0 +- Check tolerance +-	rack travel mm : 5.60 Tolerance mm : +- 0.10
cm3/1000s. : + 3.0	TOTEL GIRLL . *- U. TU
Spreed	TAROUE ANITRO
Tolerance + cm3/1000 strokes : 8.0 +	TORQUE CONTROL
	Rated speed rpm : 1100

Tolerance mm	; +-	0.05
5-1 1 1		000

Rated speed rpm : 800 rack travel mm : 13.40 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 1200
rack travel mm : 13.40
Tolerance mm : + 0.10

Rated speed rpm : 500
Pressure hPa : rack travel mm : 8.90
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 800

Pressure hPa : 510 rack travel mm : 12.20 Tolerance mm : + 0.20

Pressure hPa : 250 rack travel mm : 10.00 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 800

Del. quantity cm3/1000 strokes : 153.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1900 strokes : 78.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 415 Rack travel in mm: 5.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000S.: +-4.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 6.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition : 17.07.97 : ISO 4113 Test oil

Combination No. : 0 402 196 709

Injection pump

Pump designation : PES6P120A720RS3354 EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. :

Cust. part No. : RE 67771

Customer-spec. information Customer : DEERE : 6081HRW06 Motor Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05 3.60 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 8.50 Tolerance : ← 0.50 Check

tolerance °NW : +- 0.75

Barrei no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50 Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) : 3,100 Uact V 13.00 CRT mm Tolerance mm : +/- 0.05Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Setting point (qmuq M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm : +/- 0.25 Tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 : +/- 0.6 Tolerance V Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1100 Uact V 2.880 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +-3.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0 FUEL DELIVERY CHARACTERISTICS 700 Rated speed rpm Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 425 Rated speed rpm Uact V 1.610

tolerance mm : ± -0.35

Check

Del. quantity		
cm3/1000 strokes	:	22.0
Tolerance		
cm3/1000 strokes	: +	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	6.0
Check tolerance		
cm3/1000s.	:	10.0

TEST POINT L1

Rated speed rpm	:	425
Uact V	:	1.610
Tolerance Volt	: +	- 0.060
Check tolerance		
Volt	: +	- 0.060

STARTING FUEL DELIVERY

Rated speed rpm Uact V	:	100 4.600
Del. quantity cm3/1000 strokes Tolerance	:	105.0
cm3/1000 strokes Check tolerance	: +	- 10.0
cm3/1000s.	: +-	- 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 710

Injection pump

Pump designation : PES6P120A720RS3354 EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. :

Cust. part No. : RE 67448

Customer-spec. information
Customer : DEERE
Motor : 6081AT002
Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.00 Tolerance : +- 0.50 Check

neck

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50
Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR **POSITION** Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V 13.00 CRT mm Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) Uact V 1.700 6.15 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30Setting point (qmuq M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (M pump) 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position.

0.75

: +/- 0.25

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1100 Uact V 2.880 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. 3.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0 425 Rated speed rpm : Uact V 1.610

tolerance mm : ± -0.35

CRT mm

Check

Tolerance mm

Del. quantity		
cm3/1000 strokes	:	22.0
Tolerance		
cm3/1000 strokes	: +	3.0
Check tolerance		
cm3/1000s.	: +	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	6.0
Check tolerance		
cm3/1000s.	:	10.0

TEST POINT L1

Rated speed rpm : 425
Uact V : 1.610
Tolerance Volt : + 0.060
Check tolerance

Volt : + 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.600
Del. quantity
cm3/1000 strokes : 105.0
Tolerance
cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17,07,97 Test oil : ISO 4113

Combination No. : 0 402 196 711

Injection pump

Pump designation : PES6P120A720RS3354 EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 68148

Customer-spec. information Customer : DEERE : 6081HDW02 Motor Power KW : 163.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : **←** 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Start of delivery blocking

*NW after s.o.d. : 7.75 Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

: 15.00 travel Tolerance mm : +- 0.50 Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1:

Setting point (P, R and H pump)

3.100 Uact V 13.00 CRT mm : +/- 0.05 Tolerance mm

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

Uact V 1.700 : CRT mm 6.15 : +/- 0.25 Tolerance mm Check

tolerance mm : +/- 0.30

Setting point (quruq M)

3,100 Uact V 12.50 CRT mm Tolerance mm : +/- 0.05 Check

: +/- 0.10 tolerance mm

Check value (qmuq M)

Uact V 1.700 CRT mm 5.50 Tolerance mm : +/- 0.25 Check

: +/- 0.30 tolerance mm

Stop position

Uact V : Value with

deenergised adjusting magnet and control rod in

stop position.

0.75 CRT mm : +/- 0.25 Tolerance mm

Check

tolerance mm : ± -0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 1100 Uact V 2.880 Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 700 : Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +--3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance 8.0

cm3/1000 strokes : Check tolerance

cm3/1000s.12.**0**

425 Rated speed rpm 1.610 Uact V

	: 22.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: ← 6.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 10.0
TEST POINT L1	
Datad aread are	. /25

Rated speed rpm : 425 Uact V : 1.610 Tolerance Volt : + 0.060 Check tolerance

Volt : + 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.600
Del. quantity
cm3/1000 strokes : 105.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 712

Injection pump

Pump designation : PES6P110A320RS3386 EP type number : 0 412 016 757

Governor

Governer design. : RE30

Governer no. : 0 421 890 044

Cust. part No. : RE 69563

Customer—spec. information
Customer : DEERE

Motor : 6068HDW55 Power KW : 127.0

TEST BENCH REQUIREMENTS

Inlet ' ne : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after f.o.d. : 6.50 Tolerance : + 0.50 Check

uneck

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : + 0.50
Difference °CS : 2.00

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1:

Setting point (P, R and H pump)

3.100 Uact V 13.00 CRT mm : +/- 0.05 Tolerance mm

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

1.700 Uact V : CRT mm 6.15 : +/- 0.25 Tolerance mm Check

: +/- 0.30 tolerance mm

Setting point (M pump)

3.100 Uact V 12.50 CRT mm Tolerance mm : +/- 0.05 Check

: +/- 0.10 tolerance mm

Check value (dmuq M)

Uact V 1.700 CRT mm 5.50 Tolerance mm : +/- 0.25

Check

: +/- 0.30 tolerance mm

Stop position

Uact V : Value with

> deenergised adjusting magnet and control rod in

> > stop position.

0.75 CRT mm : +/- 0.25 Tolerance mm

Check

tolerance mm : ± -0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Check

: +/- 1.20 tolerance V

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm 1000 : Uact V 3.180 Del. quantity

cm3/1000 strokes : 142.0 Tolerance

cm3/1000 strokes : +-1.0 Check tolerance

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 600 Uact V 3.180 Del. quantity

cm3/1000 strokes : 143.0 Tolerance

cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s.

6.0 : +-

Tolerance

Spreed

cm3/1000 strokes : 8.0

Check tolerance

12.0 cm3/1000s.

400 Rated speed rpm 1.590 Uact V

Del. quantity cm3/1000 strokes : 16.5 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 TEST POINT L1

Rated speed rpm : 400 Uact V : 1.590 Tolerance Volt : + 0.060 Check tolerance

Volt : ← 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.600
Del. quantity
cm3/1000 strokes : 115.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17,07,97 Test oil : ISO 4113

Combination No. : 0 402 734 801

Injection pump

Pump designation : PES4P120A120RS7313 EP type number : 0 412 724 801

Governor

Governer design. : RQV400...1250PA1113K

Governer no. : 0 421 815 376

Cust. part No. : 3926603

Customer-spec. information Customer : CDC Motor : 4BTA-A Power KW : 97.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 12.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.75

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.85 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 173.5	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Spreed	cm3/1000s. : 12.0
+	
Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
Check tolerance cm3/1000s. : 12.0	<pre>control lever position degree : 116.0 tolerance degree : + 6.0</pre>
+	RATED SPEED
Rated speed rpm : 420 +	rack travel mm : 13.40
+	Rated speed rpm : 1310
Rack travel in mm: 6.60 +	Tolerance 1/min : +- 15
Tolerance mm : +- 0.20 +	
Del. quantity +	rack travel mm : 4.00
cm3/1000 strokes : 16.0 +	Rated speed rpm : 1480 _
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 3.0 +	
Check tolerance +	rack travel mm : 0.50
cm3/1000s. : + 5.0 +	Tolerance mm : + 0.50
Spreed	Rated speed rpm : 1550
Tolerance	
cm3/1000 strokes : 4.0 +	
Check tolerance + cm3/1000s. : 8.0 +	
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever
WITH GOVERNOR	position degree : 71.5
1	tolerance degree : + 6.0
GUIDE SLEEVE POSITION	Control lever difference
1	Grad : 44.5
}	tolerance degree : +- 6.0
control lever	
position degree : MAx +	Setting point w/out bumper spring
Rated speed rpm : 1475 +	
	Rated speed rpm : 300
Rack travel in mm: 10.50	
Tolerance mm : +- 1.50	CRT mm min. : > 7.50
†	Tank in a
FULL LOAD DELTUEDY AT FULL LOAD CTOD	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Poted around now - /20
Detail aread pro : 1150	Rated speed rpm : 420
Rated speed rpm : 1150	rack travel mm : 6.60 Tolerance mm : + 0.20
Aneroid pressure + hPa : 1200 +	TOTE TAILE MIN . TO U.ZU
	Rated speed rpm : 425
Del. quantity + cm3/1000 strokes : 173.5 +	Rated speed rpm : 425
CIND/ FUOU SUPURES : 1/3.3	

TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.85 Tolerance mm : + 0.05 Rated speed rpm : 850 rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 1150 Pressure hPa : 10.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s strokes : + 2.0		+ Del. quantity
Rated speed rpm : 1150 rack travel mm : 14.85 Tolerance mm : + 0.05 Rated speed rpm : 850 Rated speed rpm : 850 Tolerance mm : + 0.20 Rated speed rpm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa :	TORQUE CONTROL	
Tolerance mm : + 0.05 Rated speed rpm : 850 rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 10.50 Tolerance mm : + 0.50 Rated speed rpm : 10.50 Tolerance mm : + 0.50	Rated speed rpm : 1150	+ cm3/1000 strokes : +- 3.0
Rated speed rpm : 850	rack travel mm : 14.85	
Rated speed rpm : 850	Tolerance mm : + U.U5	
Tack travel mm	Rated speed rpm : 850	
Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0	rack travel mm : 13.90	
Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 10.50 Tolerance mm : + 0.50 Del. quantity Cm3/1000 strokes : 4.0 STARTING FUEL DELIVERY Pressure hPa : 10.50 Tolerance mm : + 0.50 Del. quantity Cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0	Tolerance mm : + 0.20	
Tack travel mm	4050	+ cm3/1000s. : 12.0
hPa	Rated speed rpm : 125U	†
hPa	Tolerance mm : + 0.20	Aneroid pressure
ANEROID/ALTITUDE COMPENSATOR TEST Del. quantity cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 10.50 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 100 rack travel mm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0	TO COT WITH COURT	
COMPENSATOR TEST cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 STARTING FUEL DELIVERY Pressure hPa : - rack travel mm : 10.50 Rated speed rpm : 100 rack travel mm : 12.80 Tolerance mm : + 0.50 MEASUREMENT Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Tolerance cm3/1000 strokes cm3/1000 str		
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0		
Cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0	COMPENSATOR TEST	
Check tolerance cm3/1000s. : + 4.0		
Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0	SETTING	
Rated speed rpm : 1150		+ cm3/1000s. : +- 4.0
Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0		†
Pressure hPa : -	Pressure hPa : 1200	†
Pressure hPa : -	Rated speed rpm : 1150	T STARTING FUEL DELIVERY
Tolerance mm : + 0.20	Pressure hPa : -	
Tolerance mm : + 0.50 MEASUREMENT		
MEASUREMENT	Tolerance mm : \leftarrow 0.20	· · · · · · · · · · · · · · · · · · ·
Rated speed rpm : 1150 + cm3/1000 strokes : 150.0 + Tolerance + cm3/1000 strokes : + 20.0	MEACHDEMENT	
Rated speed rpm : 1150 + Tolerance + cm3/1000 strokes : + 20.0	MEASUREMENT	
+ cm3/1000 strokes : +- 20.0	Rated speed rpm : 1150	
Pressure hPa : 555 + Check tolerance		
rack travel mm : 13.20 + cm3/1000s. : +- 25.0 Tolerance mm : +- 0.20 +		+ cm3/1000s. : +- 25.0
Toterance min : += 0.20	Toterance min : +- 0.20	I
Pressure hPa : 290	Pressure hPa : 290	
rack travel mm : 11.50	rack travel mm : 11.50	
Tolerance mm : +- 0.15 + LOW IDLE	Tolerance mm : +- 0.15	+ LOW IDLE
Rated speed rpm : 420		Pated speed rom : 420
Start interlock	Start interlock	T Nated Speed I pill . 420
Rack travel in mm: 6.60		
Rated speed rpm : > 100 + Tolerance mm : + 0.20	•	
Rated speed rpm : < 315	Rated speed rpm : < 315	
Check Tolerance	Check	
speed 1/min :> 80 + cm3/1000 strokes : + 3.0	****	
Check tolerance	Check	+ Check tolerance
speed 1/min : < 325 + cm3/1000s. : +- 5.0	speed 1/min : < 325	
+ Spreed		
FUEL DELIVERY CHARACTERISTICS + cm3/1000 strokes : 4.0	ELEL DEL TIVEDY CHADACTEDISTICS	
+ Check tolerance	TOLL PELLVENT CHARACTERISTICS	
Aneroid pressure	Aneroid pressure	+
hPa : 1200 +	hPa : 1200	†
Rated speed rpm : 850 +	Rated speed rpm : 850	†

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.07.97 Test oil : ISO 4113

Combination No. : 0 402 736 807

Injection pump

Pump designation : PES6P110A120RS7214 EP type number : 0 412 716 805

Governor

Governer design. : RQV350...1100PA964

: -1K

Governer no. : 0 421 815 253

Cust. part No. : 3921771

Customer-spec. information
Customer : CDC
Motor : 6CTA-A
Power KW : 201.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

tolerance mm

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.40
Tolerance mm : + 0.05
Check

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: + - 0.10

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 15.85

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 210.0	Tolerance mm : +- 0.29
Tolerance	Rated speed rpm : 1200 guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 9.80 Tolerance mm : +- 0.20
Check tolerance cm3/1000s. : + 4.0	
Spreed	GUIDE SLEEVE POSITION
+	
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1
Check tolerance	
cm3/1000s. : 9.0 ±	FULL LOAD DELIVERY AT FULL LOAD STOP
1	Rated speed rpm : 1050 Aneroid pressure
Rated speed rpm : 350 $\frac{1}{1}$	hPa : 1500
+	Del. quantity
Rack travel in mm: 5.80 +	cm3/1000 strokes : 210.0
Tolerance mm : + 0.10 +	Tolerance
Del. quantity +	cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 30.0	Check tolerance
Tolerance +	$cm3/1000s$. $: \leftarrow 4.0$
cm3/1000 strokes : + 3.0 +	Spreed
Check tolerance	Tolerance
cm3/1000s. : + 5.0 +	cm3/1000 strokes : 5.0
Spreed	Check tolerance
Tolerance	cm3/1000s. : 9.0
cm3/1000 strokes : 8.0	. , , , ,
Check tolerance	
cm3/1000s. : 12.0	
. 12.0	CONTROL LEVER
†	
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR +	position degree : 120.0
<u> </u>	tolerance degree : +→ 6.0
ALIZA DE PROPERTO DE LA CONTRACTOR DE LA	DATED OFFE
GUIDE SLEEVE TRAVEL	RATED SPEED
+	rack travel mm : 14.50
Rated speed rpm : 1000	Rated speed rpm : 1150
guide sleeve	Tolerance 1/min : +- 5
travel mm : 8.20 +	4.00
Tolerance mm : + 0.10 +	rack travel mm : 4.00
T	Rated speed rpm : 1315
Rated speed rpm : 350 +	Tolerance 1/min : + 15
guide sleeve	
travel mm : 1.90 +	rack travel mm : 0.50
Tolerance mm : +- 0.10 +	Tolerance mm : \leftarrow 0.50
<u> </u>	Rated speed rpm : 1400
Rated speed rpm : 450 +	
guide sleeve	
travel mm : 3.30	
Tolerance mm : \div 0.20 \dagger	
+	LOW IDLE
Rated speed rpm : 600	
guide sleeve	
travel mm : 5.30	
·	

	+ Tolerance mm : +- 0.20
control lever position degree : 67.0 tolerance degree : +- 6.0	Pressure hPa : 335 rack travel mm : 10.15 Tolerance mm : + 0.05
Control lever difference	+
Grad : 53.0 tolerance degree : + 6.0	Start interlock
Setting point w/out bumper spring	Rated speed rpm : > 100
Rated speed rpm : 275	Rated speed rpm : < 290
CRT mm min. :> 7.20	+ Check + speed 1/min :> 80
Testing:	Check speed 1/min : < 300
Rated speed rpm : 350 rack travel mm : 5.80 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 425	Aneroid pressure hPa : 1500 Rated speed rpm : 650
TORQUE CONTROL Rated speed rpm : 1050	<pre>+ Del. quantity + cm3/1000 strokes : 193.5</pre>
rack travel mm : 15.85 Tolerance mm : + 0.05	Tolerance : +- 3.0
Rated speed rpm : 650 rack travel mm : 13.40	Check tolerance cm3/1000s. : + 6.0 Spreed
Tolerance mm : +- 0.20 Rated speed rpm : 1100	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 1100 rack travel mm : 15.60 Tolerance mm : + 0.10	Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE	Aneroid pressure
COMPENSATOR TEST	Rated speed rpm : 500 Del. quantity
SETTING	cm3/1000 strokes : 93.0 Tolerance
Reted speed rpm : 1050	cm3/1000 strokes : +- 2.0 Check tolerance
Pressure hPa : 1500 rack travel mm : 15.85 Tolerance mm : + 0.05	- cm3/1000s. : + 4.0
Rated speed rpm : 1050 Pressure hPa : -	STARTING FUEL DELIVERY
rack travel mm : 8.30 Tolerance mm : + 0.20	Rated speed rpm : 100 rack travel mm : 11.50
MEASUREMENT	Tolerance mm : +- 0.50 - Del. quantity
Rated speed rpm : 1050	- cm3/1000 strokes : 155.0 - Tolerance
Pressure hPa : 845 rack travel mm : 13.80	+ cm3/1000 strokes : + 20.0 + Check tolerance + cm3/1000s. : + 25.0
rack travel mm : 13.80	T (1113/1000). : T 23.0

LOW IDLE

Rated speed rpm	:		350	
Rack travel in mm Tolerance mm Del. quantity		+-	5.80 0.10	
cm3/1000 strokes	:		30.0	
cm3/1000 strokes Check tolerance	:	+	3.0	
cm3/1000s. Spreed	:	+	5.0	
Tolerance cm3/1000 strokes Check tolerance	:		8.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 403 466 148

Injection pump

Pump designation : PES6MW100/120RS1137

: -3

EP type number : 0 413 406 236

Governor

Governer design. : RSV550...1100MW2A335

: -8

Governer no. : 0 420 085 244

Cust. part No. : 392 9184

Customer-spec. information

Customer : CDC

Motor : 6CTA-830/2188E

Power KW : 209.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : $^{\circ}$ C : $^{\circ}$ C Tolerance $^{\circ}$ C : $^{\circ}$ C :

Overflow valve : 1 417 433 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.55 Tolerance mm : + 0.05

†	Aneroid pressure
Del. quantity cm3/1000 strokes : 170.5	hPa : 1300 Del. quantity
Tolerance	cm3/1000 strokes : 170.5 Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Spreed	cm3/1000 strokes : 4.0 Check tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	CONTROL LEVER
1	control lever position degree : 97.0
Rated speed rpm : 550	tolerance degree : + 4.0
Rack travel in mm : 6.85	RATED SPEED
Tolerance mm : + 0.10 + Del. quantity +	rack travel mm : 13.50 Rated speed rpm : 1165
cm3/1000 strokes : 27.5	Tolerance 1/min : +- 5
Tolerance + 2.0 +	rack travel mm : 4.00
Check tolerance +	Rated speed rpm : 1255
cm3/1000s. : +- 4.5	Tolerance 1/min : +- 5
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5 + Check tolerance	Tolerance mm : +- 0.55 Rated speed rpm : 1350
cm3/1000s. : 5.5	, ,
†	rack travel mm : 4.00 Rated speed rpm : 1265
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1265 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	control lever
position degree : - 3	position degree : 70.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm: 0.55	Control lever difference
Tolerance mm : + 0.20	Grad : 27.0 tolerance degree : +- 4.0
governor spring	_
pre-tension + click setting x : 3.75 +	Setting point w/out bumper spring
tick setting x . S.15	Rated speed rpm : 550_
ELLI LOAD DELTVERY AT ELLI LOAD STOR	rack travel mm : 6.35 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1100 +	Testing:

		<u> </u>
Rated speed rpm rack travel mm Tolerance mm	: 6.85 : +- 0.10	Aneroid pressu hPa Rated speed rp Del. quantity
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 600 : + 30	+ cm3/1000 strok + Tolerance + cm3/1000 strok + Check tolerance
SET IDLE AUXILIA	RY SPRING	cm3/1000s.
rack travel mm	: 2.00	Aneroid pressu
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 14.55 : +- 0.05	hPa + Rated speed rp - Del. quantity + cm3/1000 strok + Tolerance - cm3/1000 strok
Rated speed rpm rack travel mm Tolerance mm	: 750 : 15.30 : + 0.20	Check tolerand
Rated speed rpm rack travel mm Tolerance mm	: 15.10	STARTING FUEL
ANEROID/ALTITUDE COMPENSATOR TEST SETTING		rack travel mm Tolerance mm Del. quantity cm3/1000 strok Tolerance cm3/1000 strok Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1300 : 15.30 : +- 0.20	cm3/1000s.
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.95 : +- 0.10	LOW IDLE Rated speed rp
MEASUREMENT		+ Rack travel in + Tolerance mm + Del. quantity
Rated speed rpm	: 500	cm3/1000 strok
Pressure hPa rack travel mm Tolerance mm	: 620 : 13.25 : + 0.20	cm3/1000 strok Check toleranc cm3/1000s.
Pressure hPa rack travel mm Tolerance mm	: 470 : 12.10 : ← 0.05	Tolerance - cm3/1000 strok - check tolerance - cm3/1000s.

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : ISO 4113

Combination No. : 0 400 074 896

Injection pump

Pump designation : PES4M55C32ORS110 EP type number : 0 410 054 956

Governor

Governer design. : RSF375/2200M21 Governer no. : 0 420 021 148

Cust. part No. :

Customer-spec. information

: MB-NFZ Customer

: 0M616 2.4L ADA Motor

: 55.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 012

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

148.5 bar Tolerance bar : +- 1.5

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 1.75 Tolerance mm : + 0.05

Check

tolerance mm : + - 0.10

Rack travel in mm: 20.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Start of delivery mark

Tolerance : +- 0.20

Check

tolerance °NW : + - 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.65

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 37.5

Tolerance

cm3/1000 strokes : +-0.5

Chack tolerance

cm3/1000s. : +- 1.5

Spreed

Tolerance

cm3/1000 strokes : 2.5

Charle talanana	+	
Check tolerance cm3/1000s.	3.0	SET IDLE CONTROL LEVER POSITION
Rated speed rpm :	375	Rated speed rpm : 1000
Rack travel in mm : Tolerance mm : Del. quantity	6.20 + 0.10	CRT mm max. : 1.45
cm3/1000 strokes : Tolerance	+	LOW IDLE
cm3/1000 strokes : Spreed Tolerance	+ 0.5	control lever position degree : 10.0
cm3/1000 strokes :	1.0	tolerance degree : +- 2.0
(B) SETTING OF INJE	ECTION PUMP	Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 6.20
IDLE STAGE		SET IDLE AUXILIARY SPRING
	+	Rated speed rpm : 450 mark travel mm : 5.20
Rack travel in mm : Tolerance mm :		Telerance mm : +- 0.10 rack travel mm : 2.00
	I	Rated speed rpm : 780
FULL LOAD DELIVERY	AT FULL LOAD STOP	Tolerance 1/min : +- 50
Rated speed rpm : Ref. pressure	+	Load pick-up
ALDA / ADA hPa : Del. quantity	+	Rated speed rpm : 250 rack travel mm : > 10.00
cm3/1000 strokes : Tolerance	+	Rated speed rpm : 1000
Check tolerance	+ 0.5	CRT mm max. : 1.45
cm3/1000S. : Spreed Tolerance	+ 1.5	rack travel mm : 6.20 Rated speed rpm : 375
cm3/1000 strokes : Check tolerance	2.5	Rated speed rpm : 375
	3.0	TORQUE CONTROL
RATED SPEED	+	Rated speed rpm : 1000 rack travel mm : 12.65 Tolerance mm : +- 0.05
control lever position degree :	50.0	Rated speed rpm : 1700 rack travel mm : 12.30
Rated speed rpm : rack travel mm :	2350	rack travel mm : 12.30 Tolerance mm : + 0.10
	+ 0.20	Rated speed rpm : 2150 rack travel mm : 11.90
Rated speed rpm : rack travel mm : Tolerance mm :	2500 0.50 +- 0.50	Tolerance mm : +- 0.10
	+	ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm	:	1000
Ref. pressure		
ALDA / ADA hPa	:	950

-0.10rack travel mm : + 0.10Tolerance mm

MEASUREMENT

Rated speed rpm 1000 Ref. pressure ALDA / ADA hPa 900 : rack travel mm -0.60Tolerance mm : +- 0.10

Ref. pressure

ALDA / ADA hPa 750 -2.00 rack travel mm Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure

ALDA / ADA hPa 1100 Rated speed rpm 1700

Del. quantity

cm3/1000 strokes : 38.3

Tolerance

cm3/1000 strokes : \leftarrow 0.8

Check tolerance

cm3/1000s. : + 1.8

Spreed

Tolerance

2.5 cm3/1000 strokes :

Check tolerance

cm3/1000s. 3.0

Ref. pressure

1100 ALDA / ADA hPa Rated speed rpm 2150

Surred

Del. quantity

cm3/1000 strokes : 38.3

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-2.0

Spreed Tolerance

2.5 cm3/1000 strokes :

Check tolerance

3.0 cm3/1000S.

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm : 20.10 Del. quantity

cm3/1000 strokes :

52.0 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance cm3/1000s. 6.0

LOW IDLE

Rated speed rpm 375

Del. quantity

cm3/1000 strokes : 8.3

Check tolerance

cm3/1000s. 1.8

Spreed

Check tolerance

cm3/1000s. 1.5

control lever

position degree : > 49.00

control lever

position degree : < 46.50

SETTING PNEUMATIC FAST IDLE (PLA)

(PLA) POSITION

control lever

position degree 10.0 : tolerance degree : +- 2.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.07.97 Edition Test oil : ISO 4113

Combination No. : 0 401 846 529

Injection pump

Pump designation : PE6P120A320RS3186 EP type number : 0 411 826 756

Governor

Governer design. : RQV250...1025PA921

: -4

: 0 421 813 787 Governer no.

Cust. part No. : 422719-P05 V. 06/92

Customer-spec. information

Customer : VOLVO-TRUCK Motor : TD102F (Q) Power KW : 220.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 2.5 Tolerance bar $: \leftarrow 0.1$

Overflow quantity

: 120 min. L/h Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.65 : +- 0.05 Tolerance mm Check

tolerance mm : ← 0.10

Rack travel in mm : 10.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: +- 0.75 tolerance *NW

Start of delivery mark

: **←** 0.50 Tolerance

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

	† Tolerance mm : +- 0.05
BASIC SETTING	Rated speed rpm : 900 guide sleeve
Rated speed rpm : 700	+ travel mm : 6.50 + Tolerance mm : +- 0.10
Rack travel in mm : 12.45	
Tolerance mm : + 0.05	+ guide sleeve
Del. quantity cm3/1000 strokes : 198.0	+ Tolerance mm : +- 0.15
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 700 guide sleeve travel mm : 6.50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : +- 0.10
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1080
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.10 Tolerance mm: + 0.10 Del. quantity	Rated speed rpm : 700 Aneroid pressure hPa : 1000
cm3/1000 strokes : 19.0 Tolerance	Del. quantity cm3/1000 strokes : 198.0
cm3/1000 strokes : + 2.5 Check tolerance	Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. : +- 5.0 Spreed Tolerance	+ Check tolerance + cm3/1000s. : + 4.0 + Spreed
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 7.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Cm3/100/3. : 7.0	m3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 62.0
Rated speed rpm : 1080 guide sleeve	tolerance degree : +- 4.0
travel mm : 8.40 Tolerance mm : +- 0.10	 control lever position degree : 117.0 tolerance degree : + 4.0
Rated speed rpm : 250 guide sleeve	+ RATED SPEED
travel mm : 1.25	+ rack travel mm : 11.45

Rated speed rpm : 1060 Tolerance 1/min : +- 5 4.00 rack travel mm Rated speed rpm : 1135 Tolerance î/min : + 15 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250 LOW IDLE control lever position degree : 65.0 tolerance degree : + 4.0 control lever position degree : tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 7.00Testing: Rated speed rpm : 250 rack travel mm : 5.10 Tolerance mm : **←** 0.10 Rated speed rpm : 300 TORQUE CONTROL 700 Rated speed rpm : rack travel mm : 12.45 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 12.45 Tolerance mm : **←** 0.05 Rated speed rpm : 500 Pressure hPa : rack travel mm :

9.75

Tolerance mm : +- 0.10 MEASUREMENT Rated speed rpm : 500 510 Pressure hPa rack travel mm : 2.35 : +- 0.20 Tolerance mm : 100 Pressure hPa rack travel mm : 0.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure

Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +- 4.0

LOW IDLE Rated speed rpm : 250 Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +- 2.5Check tolerance cm3/1000s. : +-5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : 17.07.97

Combination No. : 0 401 848 830

Injection pump

Pump designation : PE8P110A320LS3865 EP type number : 0 411 818 728

Governor

Governer design. : RQV250...1000PA1286

Governer no. : 0 421 814 175

Cust. part No. :

Customer-spec. information Customer : DHI : V2-8TC Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. L/h : 110
Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.00 Tolerance mm : + 0.05

	+ guide sleeve
Del. quantity	+ travel mm : 3.20
cm3/1000 strokes : 142.0	+ Tolerance mm : +- 0.25
	7000141100 111111
Tolerance	Rated speed rpm : 1300
cm3/1000 strokes : +- 1.0	+ guide sleeve
CINDY 1000 3 CT ORES 1.0	travel mm : 11.50
Charle to Language	
Check tolerance	Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	Ť
Consort	CUIDE OF EDIE DOCTION
Spreed	+ GUIDE SLEEVE POSITION
Talanana	†
Tolerance	†
cm3/1000 strokes : 6.0	+ control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1120
cm3/1000s. : 10.0	+
	+ Rack travel in mm : 12.00
	+ Tolerance mm : +- 2.00
	+
Rated speed rpm : 250	
	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 8.20	+
Tolerance mm : + 0.10	+ Rated speed rpm : 1000
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 25.0	+ hPa : -
Tolerance	+ Del. quantity
cm3/1000 strokes : + 3.0	+ cm3/1000 strokes : 142.0
Check tolerance	Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance	- cm3/1000s. : +- 4.0
cm3/1000 strokes : 6.0	Spreed
Check tolerance	Tolerance
T 11000	cm3/1000 strokes : 6.0
cm3/1000S. : 10.0	Check tolerance
(D) DETTING OF THEFETION CHAD	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	†
	CONTROL LEUED
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
	t control lever
Rated speed rpm : 1058	+ position degree : 65.0
guide sleeve	+ tolerance degree : + 4.0
travel mm : 8.56	
Tolerance mm : + 0.15	+ control lever
	+ position degree : 120.0
Rated speed rpm : 250	+ tolerance degree : + 4.0
guide sleeve	+
travel mm : 1.31	+ RATED SPEED
Tolerance mm : + 0.20	+ rack travel num : 12.00
	Rated speed rpm : 1045
Rated speed rpm : 666	Tolerance 1/min : + 5
guide sleeve	+
travel mm : 5.29	rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1155
TOTAL WIND THE TOTAL STREET	Tolerance 1/min : + 15
Rated speed rpm : 380	1000.00.00
nated speed i pill . Suu	rack travel mm : 0.50
	T TACK CLAVEC IIIII . U.JU

: +- 0.50 Tolerance mm Rated speed rpm : 1300 LOW IDLE control lever position degree : 71.0 tolerance degree : +- 4.0 control lever position degree : 16.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 9.60Testing: 250 Rated speed rpm : rack travel mm 8.20 Tolerance mm : +- 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1000 rack travel am : 13.00 : +- 0.05 Tolerance mm rack travel mm : Rated speed rpm : 650 13,00 : +- 0.10 Tolerance mm Start interlock Rated speed rpm :> 100 Rated speed rpm : < 190 Check speed 1/min : > 80 Check speed 1/min : < 210 FUEL DELIVERY CHARACTERISTICS Aneroid pressure

Del. quantity
cm3/1000 strokes : 145.0
Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 125.0
Tolerance

cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 8.20
Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +- 3.0

Check tolerance cm3/1000S. : +- 6.0 Spreed

Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 10.0

End of test specification sheet

Rated speed rpm :

650

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17,07,97 Test oil : ISO 4113

Combination No. : 0 401 878 140

Injection pump

Pump designation : PE8P120A520/5RS427 EP type number : 0 411 828 048

Governor

Governer design. : RSUV300...900P0A320

: -1

Governer no. : 0 421 829 107

Cust. part No. :

Customer-spec. information

Customer : MWM

: TBD 234 V8 Motor Power KW : 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 203.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-8-5-4-7

: - 2- 3- 6

Phasing : 0-30-90-120-180 : -210-270-300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 13.75 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 250.0

Tolerance	+ Tolerance
cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	+ Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 5.0
opi ccu	Check tolerance
Tolerance	+ cm3/1000s. : 9.0
cm3/1000 strokes : 5.0	
	1
Check tolerance	
cm3/1000s. : 9.0	+ CONTROL LEVER
	+
**************************************	- control lever
	position degree : 119.0
Rated speed rpm : 300	tolerance degree : +- 4.0
•	+
Rack travel in mm : 5.60	+ RATED SPEED
Tolerance mm : +- 0.10	rack travel mm : 12.70
Del. quantity	+ Rated speed rpm : 945
cm3/1000 strokes : 23.0	+ Tolerance 1/min : +- 5
Tolerance	+
cm3/1000 strokes : +- 3.0	rack travel mm : 4.00
Check tolerance	+ Rated speed rpm : 980
cm3/1000s. : +- 6.0	+ Tolerance 1/min : +- 15
Spreed	+
Tolerance	+ rack travel mm : 0.85
cm3/1000 strokes : 8.0	+ Tolerance mm : +- 0.55
Check tolerance	+ Rated speed rpm : 1130
cm3/1000s. : 12.0	+
	+
	+
(B) SETTING OF INJECTION PUMP	<u> </u>
WITH GOVERNOR	+ LOW IDLE
	+
	+
	+ control lever
GUIDE SLEEVE POSITION	+ position degree : 76.0
	tolerance degree : + 4.0
	† Ontring maint of out how
control lever	+ Setting point w/out bumper spring
position degree : - 3	Dated aread === 200
Rated speed rpm : 800	Rated speed rpm : 300
Onely travel in my . O. EO	+ rack travel mm : 5.10 + Tolerance mm : +- 0.10
Rack travel in mm: 0.50	+ Tolerance mm : +- 0.10
Tolerance mm : + 0.20	Tooting
anyanan annina	+ Testing:
governor spring	Rated speed rpm : 300
pre-tension click setting x : 3.80	•
click setting x : 3.80	+ rack travel mm : 5.60 + Tolerance mm : + 0.10
	Toterance mm : T U. (U
SULL LOAD DELIVEDY AT SULL LOAD STOD	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	
Detail around non . 750	+ Rated speed rpm : 350 + Tolerance 1/min : +- 30
Rated speed rpm : 750	T Total alice 1/10/11 : T 30
Aneroid pressure	T
hPa : -	TOPOUE CONTROL
Del. quantity	+ TORQUE CONTROL
cm3/1000 strokes : 250.0	Т

Dimension a mm : 3.90 750 Rated speed rpm 13.75 rack travel mm : +- 0.05 Tolerance mm 900 Rated seed rom 13.75 rack travel mm : + - 0.10Tolerance mm 450 Rated speed rpm 13.75 rack travel mm : + 0.10Tolerance mm Rated speed rpm 280 rack travel mm 15.20 : +- 0.30 Tolerance mm

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 300 Rack travel in mm : 5.60 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18,07,97 Edition : ISO 4113 Test oil

Combination No. : 0 402 046 350

Injection pump

Pump designation : PES6P110A720RS531 EP type number : 0 412 016 076

Governor

Governer design. : RQV300...1100PA1016

: -7

: 0 421 813 972 Governer no.

Cust. part No. :

Customer-spec. information

Customer : IVECO-UNIC : 8361.25.510 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : +- 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 2.05 : **←** 0.50 Tolerance mm Check

tolerance mm

: + - 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Del. quantity cm3/1000 strokes : 121.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. 3.5

Spreed

Tolerance

cm3/1000 strokes :

4.0

Check tolerance cm3/1000s.

7.5

+	
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 6.20	Rated speed rpm : 1100
Tolerance mm : + 0.10	Aneroid pressure
Del. quantity + cm3/1000 strokes : 15.5	hPa : 700 Del. quantity
Tolerance	cm3/1000 strokes : 121.0
cm3/1000 strokes : + 2.5	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 5.0 +	Check tolerance
Spreed	cm3/1000s. : +- 3.5
Tolerance cm3/1000 strokes : 4.5	Spreed Tolerance
Check tolerance	cm3/1000 strokes : 4.0
cm3/1000s. : 7.5	Check tolerance
+	cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
+	position degree : 121.0
Rated speed rpm : 750	tolerance degree : +- 4.0
guide sleeve + travel mm : 4.70 +	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 9.30
Total de limit	Rated speed rpm : 1145
Rated speed rpm : 1145	Tolerance 1/min : +- 5
guide sleeve	Check
travel mm : 8.40 +	speed $1/\min$: \leftarrow 10
Tolerance mm : + 0.10	rack travel mm : 4.00
Rated speed rpm : 300	Rated speed rpm : 1220
guide sleeve	Tolerance 1/min : + 15
travel mm : 1.00	Check
Tolerance mm : +- 0.20	speed $1/\min$: \leftarrow 20
Rated speed rpm : 500	rack travel mm : 0.50
guide sleeve	Tolerance mm : +- 0.50
travel mm : 2.80	Rated speed rpm : 1350
Tolerance mm : + 0.30 +	
· · · · · · · · · · · · · · · · · ·	rack travel mm : 4.00
Rated speed rpm : 1350	
guide sleeve + travel mm : 11.50 +	
Tolerance mm : + 0.50	
1	LOW IDLE
GUIDE SLEEVE POSITION +	and the same
†	control lever position degree : 67.0
control lever	tolerance degree : +- 4.0
position degree : -1	
Rated speed rpm : 1240	Setting point w/out bumper spring
10.01	Detail aread 100
Rack travel in mm: 9.30	Rated speed rpm : 100
Toterance mm : +- 1.30 +	

CRT mm min. : > 7.70 Testing: Rated speed rpm 300 6.20 rack travel mm : +- 0.10 Tolerance mm Rated speed rpm : 430 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm Pressure hPa 700 10.35 rack travel mm : +- 0.05 Tolerance mm Rated speed rpm 500 Pressure hPa 9.05 rack travel mm Tolerance mm : + 0.15**MEASUREMENT** Rated speed rpm 500 430 Pressure hPa 9.50 rack travel mm Tolerance mm : + 0.10465 Pressure hPa 9.95 rack travel mm : : +- 0.05 Tolerance mm Start interlock Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1100 Rated speed rpm Del. quantity cm3/1000 strokes :

Check tolerance : +- 3.5 cm3/1000s. STARTING FUEL DELIVERY ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting. Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance cm3/1000s. : +- 19.0 LOW IDLE Rated speed rpm : 300 Rack travel in mm: 6.20 Tolerance mm : \leftarrow 0.10 Del. quantity 15.5 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 : +-Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance

End of test specification sheet

7.5

cm3/1000s.

Tolerance

cm3/1000 strokes : + 1.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 651

Injection pump

Pump designation : PE6P12OA320LS7357 EP type number : 0 412 626 934

Governor

Governer design. : RQV325...975PA1190K

Governer no. : 0 421 815 450

Cust. part No. :

Customer—spec. information Customer : LIAZ : M640T Motor Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

: 1 417 413 025 Overflow valve

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.80 : + 0.05Tolerance mm Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 12.00 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

: +- 0.50Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 725

Rack travel in mm: 14.40 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 267.0

Tolerance cm3/1000 strokes : +- 1.0	+ Tolerance mm : +- 0.25 + Rated speed rpm : 1240
Check tolerance cm3/1000S. : +- 4.0	+ guide sleeve + travel mm : 13.50
Spreed	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 9.0	control lever position degree : - 1 Rated speed rpm : 1070
Rack travel in mm : 4.10 Tolerance mm : +- 0.30	Rack travel in mm : 14.10 Tolerance mm : +- 1.50
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 725 Aneroid pressure hPa : -
GUIDE SLEEVE TRAVEL	+ Del. quantity + cm3/1000 strokes : 267.0 + Tolerance
Rated speed rpm : 1033 guide sleeve	+ cm3/1000 strokes : + 1.0 + Check tolerance
travel mm : 10.20	+ cm3/1000s. : +- 4.0
Tolerance mm : +- 0.20	- Spreed
Rated speed rpm : 325 guide sleeve travel mm : 1.43 Tolerance mm : + 0.15	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm : 620	
guide sleeve travel mm : 5.01	† CONTROL LEVER
Tolerance mm : +- 0.25	+ control lever
Rated speed rpm : 370 guide sleeve	position degree : 70.0 tolerance degree : + 4.0
travel mm : 2.00	T control lever
Tolerance mm : +- 0.25	position degree : 122.0 tolerance degree : +- 4.0
Rated speed rpm : 420 guide sleeve	RATED SPEED
travel mm : 2.64	+ rack travel mm : 14.10
Tolerance mm : + 0.25	Rated speed rpm : 1020 Tolerance 1/min : + 5
Rated speed rpm : 460 guide sleeve	rack travel mm : 4.00
travel mm : 3.02	Rated speed rpm : 1125
Tolerance mm : +- 0.25	Tolerance 1/min : + 15
Rated speed rpm : 1141 guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm : 12.00	Rated speed rpm : 1200

LOW IDLE	
control lever position degree talerance degree control lever	: 67.0 : +- 4.0
position degree tolerance degree	: 14.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 5.30
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.10 : + 0.30
Rated speed rpm	: 350
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 725 : 14.40 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.10 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 975 : 1500 : 15.15 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 975 : - : 9.40 : + 0.10

Rated speed rpm	: 975		
Pressure hPa rack travel mm Tolerance mm	: 320 : 11.00 : + 0.25		
Pressure hPa rack travel mm Tolerance mm	: 590 : 13.50 : + 0.05		
Start interlock		-	
Rated speed rpm Rated speed rpm	: > 100 : < 245		
Check speed 1/min Check	: > 80		
speed 1/min	: < 265		
FUEL DELIVERY CHARACTERISTICS			
Aneroid pressure hPa Rated speed rpm	: - : 975		
Del. quantity cm3/1000 strokes Tolerance	: 262.0		
cm3/1000 strokes Check tolerance	: +- 3.0		
cm3/1000s.	: +- 6.0		
Aneroid pressure	_		
hPa Rated speed rpm Del. quantity	500		
cm3/1000 strokes Tolerance	: 141.0		
cm3/1000 strokes Check tolerance	: + 2.0		
cm3/1000s.	: +- 4.0		
STARTING FUEL DEL	IVERY		
Rated speed rpm Del. quantity	: 100		
cm3/1000 strokes	: 300.0		

MEASUREMENT

Tolerance

Check tolerance

cm3/1000 strokes : \leftarrow 20.0

cm3/1000s. : + 24.0

LOW IDLE

Rack travel in mm : 4.10 Tolerance mm : + 0.30

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 646 967

Injection pump

Pump designation : PE6P130A720RS7150

: -10

EP type number : 0 412 636 831

Governor

Governer design. : RQV250...900PA881-1

Governer no. : 0 421 813 982

Cust. part No. : 864988-P04 v.06.97

Customer-spec. information
Customer : PENTA
Motor : TAMD 162 C

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm) : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 9.40 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

		+ Tolerance mm : +- 0.30
Rack travel in mn Tolerance mm	n: 11.60 :+- 0.05	Rated speed rpm : 700 guide sleeve travel mm : 4.80
Del. quantity cm3/1000 strokes	: 336.0	+ Tolerance mm : +- 0.30
Tolerance cm3/1000 strokes	: + 1.5	Rated speed rpm : 985 guide sleeve travel mm : 8.60 Tolerance mm : + 0.20
Check tolerance cm3/1000s.	: + 5.0	
Spreed		GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 6.0	control lever position degree : - 1 Rated speed rpm : 980
Check tolerance cm3/1000s.	: 10.0	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm	: 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mn Tolerance mm Del. quantity	n: 4.20 : + 0.10	Rated speed rpm : 700 Aneroid pressure hPa : 1000
cm3/1000 strokes Tolerance	: 19.5	Del. quantity - cm3/1000 strokes : 336.0
cm3/1000 strokes Check tolerance	: +- 2.5	Tolerance cm3/1000 strokes : + 1.5
cm3/1000s. Spreed	: +- 5.0	Check tolerance cm3/1000s. : +- 5.0
Tolerance cm3/1000 strokes	: 5.0	+ Spreed + Tolerance
Check tolerance cm3/1000s.	: 8.0	+ cm3/1000 strokes : 6.0 + Check tolerance + cm3/1000s, : 10.0
(B) SETTING OF IN	NJECTION PUMP	
WITH GOVERNOR		CONTROL LEVER
GUIDE SLEEVE TRAV	/EL	control lever position degree : 118.0
Rated speed rpm guide sleeve	: 925	tolerance degree : +- 4.0
travel mm Tolerance mm	: 7.70 : +- 0.10	RATED SPEED rack travel mm : 10.60 Rated speed rpm : 930
Rated speed rpm guide sleeve	: 250	Tolerance 1/min : +- 5
travel mm Tolerance mm	: 1.10 : + 0.20	rack travel mm : 4.00 Rated speed rpm : 1000 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 350	rack travel mm : 0.50
travel mm	: 2.30	Tolerance mm : + 0.50

Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 67.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm min. :> 6.00

Testing:

250 Rated speed rpm 4.20 rack travel mm Tolerance mm : + - 0.10

Rated speed rpm : 300

TORQUE CONTROL

700 Rated speed rpm : rack travel mm : 11.60 : +- 0.05 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm 1000 Pressure hPa : 11.60 rack travel mm : +- 0.05 Tolerance mm

Rated speed rpm : 500 Pressure hPa 9.40 rack travel mm : + - 0.20Tolerance mm

MEASUREMENT

500 Rated speed rpm :

: 400 Pressure hPa 9.80 rack travel mm : +- 0.20 Tolerance mm

Pressure hPa : 680 rack travel mm : 11.30 : +- 0.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 700 Rated speed rpm :

Del. quantity cm3/1000 strokes : 228.0

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 5.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 4.20 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes :

Tolerance cm3/1000 strokes : +- 2.5

19.5

Check tolerance

cm3/1000s.5.0 Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.97 Test oil : ISO 4113

Combination No. : 0 402 648 8129

Injection pump

Pump designation : PE8P12OA320L87801

: -10

EP type number : 0 412 628 851

Governor

Governer design. : RQ300/1050PA717 Governer no. : 0 421 801 258

Cust. part No. :

Customer-spec. information
Motor : 0M442 LA
Fower KW : 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 300

Rack travel in mm		
Tolerance mm Del. quantity	: +- 0.10	
cm3/1000 strokes	: 19.0	
Tolerance cm3/1000 strokes	: +- 3.0	
Check tolerance		
cm3/1000s. Spreed	: +- 6.0	
Tolerance	r 0	
cm3/1000 strokes Check tolerance	: 5.0	
cm3/1000s.	: 8.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR		
GUIDE SLEEVE TRAV	/EL	
Rated speed rpm	: 1000	
guide sleeve travel mm	: 6.25	
Tolerance mm	: + 0.05	
Rated speed rpm	: 300	
guide sleeve		
travel mm Tolerance mm	: 2.90 : + 0.10	
Rated speed rpm	: 900	
guide sleeve		
travel mm Tolerance mm	: 6.15 : +- 0.05	
Rated speed rpm guide sleeve	: 600	
travel mm	: 6.05 : + 0.05	
Tolerance mm		
Rated speed rpm guide sleeve	: 1150	
travel mm	: 9.45	
Tolerance mm	: +- 0.15	
CHINE SLEEVE POSITION		
GUIDE SLEEVE POSITION		
control lever		
position degree Rated speed rpm	: 109 : 600	
nated speed is	. 000	

CONTROL LEVER	
control lever position degree : 101.0 tolerance degree : +- 4.0	
RATED SPEED rack travel mm : 13.40 Rated speed rpm : 1092 Tolerance 1/min : +- 8	
rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : + 15	
rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300	
LOW IDLE	
control lever position degree : 76.0 tolerance degree : +- 4.0	
Setting point w/out bumper spring	
Rated speed rpm : 300	
CRT mm min. : > 7.50	
Testing:	
Rated speed rpm : 300 rack travel mm : 6.40 Tolerance mm : + 0.10	
rack travel mm : 2.00 Rated speed rpm : 399 Tolerance 1/min : +- 20	
TORQUE CONTROL	
Rated speed rpm : 1050 rack travel mm : 14.40 Tolerance mm : +- 0.10	
Rated speed rpm : 850 rack travel mm : 14.40 Tolerance mm : +- 0.15	

Rack travel in mm : 20.00 Tolerance mm : +- 0.80

	+ Tolerance
	+ cm3/1000 strokes : +- 2.0
ANEROID/ALTITUDE COMPENSATOR TEST	+ Check tolerance + cm3/1000s. : +- 5.0
COMPENSATOR 1EST	+ cm3/1000s. : +- 5.0 + Spreed
	+ Tolerance
SETTING	+ cm3/1000 strokes : 7.0
	+ Check tolerance
Rated speed rpm : 600	+ cm3/1000s. : 10.0
Pressure hPa : 1150	+
	+
MEASUREMENT	+ Aneroid pressure
Rated speed rpm : 600	hPa : - Rated speed rpm : 500
Rated speed rpm : 6UU	+ Del. quantity
Pressure hPa : 310	+ cm3/1000 strokes : 147.0
rack travel mm : -3.10	+ Tolerance
Tolerance mm : + 0.10	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Pressure hPa : 470	+ cm3/1000s. + 4.0
rack travel mm : -1.60	Spreed
Tolerance mm : +- 0.10	Tolerance cm3/1000 strokes : 7.0
	+ Check tolerance
Start interlock	+ cm3/1000s. : 10.0
out a tite at each	10.0
Rated speed rpm : > 100	+
Rated speed rpm : < 220	
	+ STARTING FUEL DELIVERY
Check	+ Rated speed rpm : 100
speed 1/min :> 80 Check	+ Rated speed rpm : 100 + Del. quantity
speed 1/min : < 240	+ cm3/1000 strokes : 210.0
	+ Tolerance
	+ cm3/1000 strokes : +- 10.0
FUEL DELIVERY CHARACTERISTICS	+ Check tolerance
	+ cm3/1000s. : +- 14.0
Ananaid programs	†
Aneroid pressure hPa : -	I
Rated speed rpm : 1050	
Del. quantity	LOW IDLE
cm3/1000 strokes : 212.0	+
Tolerance	+ Rated speed rpm : 300
cm3/1000 strokes : + 2.0	† Park travel in an a //O
Check tolerance cm3/1000s. : +- 5.0	+ Rack travel in mm : 6.40 + Tolerance mm : +- 0.10
Spreed	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 19.0
cm3/1000 strokes : 7.0	Tolerance
Check tolerance	+ cm3/1000 strokes : + 3.0
cm3/1000s. : 10.0	- Check tolerance
	+ cm3/1000s. : +- 6.0
Accorded annual control of the contr	+ Spreed
Aneroid pressure	+ Tolerance + cm3/1000 strokes : 5.0
hPa : - Rated speed rpm : 850	+ Check tolerance
Del. quantity	- cm3/1000s. : 8.0
cm3/1000 strokes : 217.0	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17,07,97 Edition Test oil : ISO 4113

Combination No. : 0 402 648 974

Injection pump

Pump designation : PE8P120A320LS7875 EP type number : 0 412 628 881

Governor

Governer design. : RQ250/1150PA1122 : 0 421 801 704 Governer no.

Cust. part No. :

Customer-spec. information : DAEWOO Customer Motor : V2-8TC

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 5.20 Tolerance mm : + 0.05Check : **←** 0.10 tolerance mm

Rack travel in mm : 16.00 Tolerance mm : + 1.50

: 8-7-2-6-3 Firing order

: - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315

: +- 0.50

Tolerance Check

tolerance *NW : **←** 0.75

Start of delivery mark

: + - 0.50Tolerance

Check

tolerance "NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 13.60 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 208.0	+ Tolerance mm : +- 0.10
Tolerance		+ Rated speed rpm : 450 + guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 6.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: + 4.0	Rated speed rpm : 1370
	• F • • • • • • • • • • • • • • • • • •	- guide sleeve
Spreed		travel mm : 11.50 Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	: 7.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 10.0	‡
Dated aread pur	. 700	control lever position degree : 109 Rated speed rpm : 600
Rated speed rpm		Rack travel in mm: 20.00
Rack travel in mm Tolerance mm		Tolerance mm : +- 0.80
Del. quantity cm3/1000 strokes Tolerance	: 18.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: +- 3.0	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. Spreed	: + 6.0	hPa : - Del. quantity
Tolerance		+ cm3/1000 strokes : 208.0
cm3/1000 strokes Check tolerance		Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s.	: 8.0	+ Check tolerance + cm3/1000S. : + 4.0
(B) SETTING OF IN	JECTION PUMP	+ Spreed + Tolerance
WITH GOVERNOR		cm3/1000 strokes : 7.0 Check tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000s. : 10.0
Rated speed rpm	: 1207	‡
guide sleeve travel mm	: 6.36	CONTROL LEVER
Tolerance mm	: + 0.10	control lever
Rated speed rpm	: 300	position degree : 34.0 tolerance degree : + 4.0
guide sleeve travel mm	: 2.39	control lever
Tolerance mm	: + 0.10	<pre>position degree : 95.0 tolerance degree : + 4.0</pre>
Rated speed rpm guide sleeve	: 650	RATED SPEED
travel mm	: 6.00	+ rack travel mm : 12.60
Tolerance mm	: +- 0.10	+ Rated speed rpm : 1202 + Tolerance 1/min : +- 8
Rated speed rpm guide sleeve	: 382	+ rack travel mm : 4.00
travel mm	: 5.26	Rated speed rpm : 1280

Tolerance 1/min : +- 15 rack travel mm : 9.00 : +- 0.20 Tolerance mm 0.50 rack travel mm : : + 0.50 Tolerance mm **MEASUREMENT** Rated speed rpm : 1350 Rated speed rpm : 500 650 Pressure hPa : 650 : 12.30 rack travel mm LOW IDLE : +- 0.20 Tolerance mm 250 Pressure hPa control lever rack travel mm 10.00 Tolerance mm : +- 0.05 position degree : 75.0 tolerance degree : +- 4.0 control lever Start interlock position degree 14.0 tolerance degree : + 4.0 Rated speed rpm : > 205 Rated speed rpm : < 240 Setting point w/out bumper spring Check speed 1/min : > 185 Rated speed rpm : 200 CRT mm min. : > 9.20 FUEL DELIVERY CHARACTERISTICS Testing: 300 Aneroid pressure Rated speed rpm : rack travel mm 5.80 hPa Tolerance mm : + 0.10Rated speed rpm : 650 Del. quantity 2.00 cm3/1000 strokes : 226.0 rack travel mm 375 Tolerance Rated speed rpm : cm3/1000 strokes : +- 3.0Tolerance 1/min : +-Check tolerance cm3/1000s. : +- 6.0 TORQUE CONTROL 1150 Rated speed rpm : 13.60 Aneroid pressure rack travel mm Tolerance mm : +- 0.05 hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : Rated speed rpm : 650 13.60 rack travel mm : 137.0 Tolerance mm : +- 0.05 Tolerance cm3/1000 strokes : +-1.0 Check tolerance ANEROID/ALTITUDE cm3/1000s. : +- 4.0 COMPENSATOR TEST STARTING FUEL DELIVERY SETTING 500 Del. quantity Rated speed rpm : 1500 cm3/1000 strokes : Pressure hPa Tolerance rack travel mm : 13.60 : +- 0.05 cm3/1000 strokes : +- 10.0Tolerance mm Check tolerance cm3/1000s. : +- 14.0 Rated speed rpm 500

Pressure hPa

LOW IDLE

Rated speed rpm	:		300	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:		5.80 0.10 18.0	
Tolerance cm3/1000 strokes Check tolerance	: -		3.0	
cm3/1000s. Spreed Tolerance	: -	+	6.0	
cm3/1000 strokes Check tolerance	:		5.0	
cm3/1000s.	:		8.0	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 21.07.97 Test oil : ISO 4113

Combination No. : 0 402 736 908

Injection pump

Pump designation : PES6P120A120RS7413

EP type number : 0 412 726 962

Governor

Governer design. : RQV350...1250PA1280K

Governer no. : 0 421 815 521

Cust. part No. : 3283516

Customer-spec. information

Customer : CUMMINS Motor : 6BTAA Power KW : 198.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 260 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 12.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

°NW after s.o.d. : 5.00 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

	1
Rack travel in mm : 12.40 Tolerance mm : +- 0.05	Rated speed rpm : 1540 guide sleeve travel mm : 13.50
Del. quantity cm3/1000 strokes : 137.0	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : + 4.0	control lever position degree : - 1 Rated speed rpm : 1360
Spreed	Rack travel in mm : 11.40
Tolerance cm3/1000 strokes : 5.0	Tolerance mm : + 2.70
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	+ Rated speed rpm : 1250 + Aneroid pressure
Rated speed rpm : 360	+ hPa : 1500 + Del. quantity
Rack travel in mm : 6.70	+ cm3/1000 strokes : 137.0 + Tolerance
Tolerance mm : + 0.10	+ cm3/1000 strokes : + 1.0
Del. quantity cm3/1000 strokes : 25.0	+ Check tolerance + cm3/1000s. : + 4.0
Tolerance	+ Spreed
cm3/1000 strokes : +- 3.0 Check tolerance	+ Tolerance + cm3/1000 strokes : 5.0
cm3/1000s. : +- 6.0	- Check tolerance
Spreed	- cm3/1000s. : 9.0
Tolerance 7.0	+
cm3/1000 strokes : 7.0 Check tolerance	<u> </u>
cm3/1000s. : 11.0	CONTROL LEVER
	+
	+ control lever
(B) SETTING OF INJECTION PUMP	+ position degree : 65.0
WITH GOVERNOR	tolerance degree : +- 4.0
	control lever
GUIDE SLEEVE TRAVEL	position degree : 122.0
Dated around name a 171/	tolerance degree : +- 4.0
Rated speed rpm : 1314 guide sleeve	T RATED SPEED
travel mm : 10.36	+ rack travel mm : 11.40
Tolerance mm : +- 0.15	Rated speed rpm : 1295
750	+ Tolerance 1/min : + 5
Rated speed rpm : 350	rack travel mm : 4.00
guide sleeve travel mm : 1.83	+ Rated speed rpm : 1385
Tolerance mm : +- 0.20	+ Tolerance 1/min : +- 15
Rated speed rpm : 870	+ Check + speed 1/min : +- 20
guide sleeve	†
travel mm : 6.06 Tolerance mm : +- 0.25	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50

Rated speed rpm : 1500	- MEASUREMENT
	- Rated speed rpm : 1250
LOW IDLE	Pressure hPa : 750 rack travel mm : 11.80 Tolerance mm : + 0.20
control lever position degree : 78.0 - tolerance degree : + 4.0 - control lever	Pressure hPa : 350 - rack travel mm : 10.50 - Tolerance mm : + 0.05
position degree : 20.0 - tolerance degree : +- 4.0 -	Start interlock
Setting point w/out bumper spring	Rated speed rpm : > 100 Rated speed rpm : < 320
Rated speed rpm : 250	Check
CRT mm min. :> 9.40 - Testing: -	speed 1/min : > 80
Rated speed rpm : 360 -	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 6.70 - Tolerance mm : + 0.10 -	Aneroid pressure hPa : 1500
Rated speed rpm : 350	Rated speed rpm : 1100 - Del. quantity - cm3/1000 strokes : 131.0
TORQUE CONTROL Rated speed rpm : 1250 rack travel mm : 12.40	- Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance
Tolerance mm : + 0.05 Rated speed rpm : 1100	cm3/1000s. : +- 6.0 Spreed Tolerance
rack travel mm : 12.00 Tolerance mm : +- 0.10	- cm3/1000 strokes : 12.0 - Check tolerance - cm3/1000S. : 16.0
Rated speed rpm : 800 - rack travel mm : 11.10 - Tolerance mm : + 0.15	- Aneroid pressure
ANEROID/ALTITUDE	- hPa : 1500 - Rated speed rpm : 800 - Del. quantity
COMPENSATOR TEST	- cm3/1000 strokes : 120.0 - Tolerance
SETTING	- cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000s. : +- 6.0
Rated speed rpm : 1250 Pressure hPa : 1500 rack travel mm : 12.40	- Aneroid pressure
Tolerance mm : + 0.05	- hPa : - Rated speed rpm : 500
Rated speed rpm : 1250 Pressure hPa :	- Del. quantity - cm3/1000 strokes : 100.0 - Tolerance
Tolerance mm : + 0.20	- cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Set starting CRT at K-cam.

Rated speed rpm : 100
rack travel mm : 10.60
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 105.0
Tolerance
cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 360

Rack travel in mm : 6.70 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 7.0 cm3/1000 strokes : Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27,05,97 Test oil : ISO 4113

Combination No. : 0 402 736 909

Injection pump

Pump designation : PES6P120A120RS7413 EP type number : 0 412 726 962

Governor

Governer design. : RQV350...1250PA1281K

Governer no. : 0 421 815 522

Cust. part No. : 3283517

Customer-spec. information Customer : CUMMINS Motor : 6BTAA Power KW : 173.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity
min. L/h : 125
Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 12.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 5.00 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

1	
Rack travel in mm: 13.70	- Rated speed rpm : 1540
Tolerance mm : $+-$ 0.05	- guide sleeve
· ·	- travel mm : 13.50
Del. quantity	Tolerance mm : + 0.50
cm3/1000 strokes : 154.0	•
Tolerance	- GUIDE SLEEVE POSITION
cm3/1000 strokes : + 1.0	•
Check tolerance	· control lever
cm3/1000s. : +- 4.0	position degree : - 1
	Rated speed rpm : 1350
Spreed	
	Rack travel in mm: 13.10
Tolerance	Tolerance mm : +- 2.70
cm3/1000 strokes : 5.0	
5.00 GC1 GRES 1. 3.0	
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 9.0	. Same marries of management of the trade to other the office of the
	Rated speed rpm : 1250
	Aneroid pressure
1	hPa : 1500
Rated speed rpm : 360	Del. quantity
, , , , , , , , , , , , , , , , , , ,	cm3/1000 strokes : 154.0
Rack travel in mm: 6.40	Tolerance
Tolerance mm : +- 0.10	cm3/1000 strokes : +- 1.0
Del. quantity	Check tolerance
cm3/1000 strokes : 25.0	cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : + 3.0	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : + 6.0	Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance	
cm3/1000 strokes : 7.0	
Check tolerance	
cm3/1000s. : 11.0	CONTROL LEVER
↓	control lever
(B) SETTING OF INJECTION PUMP	position degree : 66.0
WITH GOVERNOR +	tolerance degree : +- 4.0
4	.
	control lever
GUIDE SLEEVE TRAVEL	position degree : 120.0
+	tolerance degree : +- 4.0
Rated speed rpm : 1315	
guide sleeve +	RATED SPEED
travel mm : 10.39	rack travel mm : 12.70
Tolerance mm : \leftarrow 0.15	Rated speed rpm : 1290
+	Tolerance 1/min : +- 5
Rated speed rpm : 350 +	
guide sleeve +	rack travel mm : 4.00
travel mm : 2.05	Rated speed rpm : 1390
Tolerance mm : \leftarrow 0.20 $+$	Tolerance 1/min : +- 15
+	Check
Rated speed rpm : 860 +	speed 1/min : +- 20
guide sleeve	
travel mm : 6.01 +	rack travel mm : 0.50
Tolerance mm : \leftarrow 0.25	Tolerance mm : +- 0.50
·	

Rated speed rpm : 1500	+ MEASUREMENT
	+ Rated speed rpm : 1250
LOM IDLE	+ Pressure hPa : 1050 + rack travel mm : 13.40 + Tolerance mm : + 0.20
control lever position degree : 78.0 tolerance degree : + 4.0 control lever	Pressure hPa : 400 rack travel mm : 10.30 Tolerance mm : + 0.05
position degree : 24.0 tolerance degree : +- 4.0	Start interlock
Setting point w/out bumper spring	Rated speed rpm : > 100 Rated speed rpm : < 300
Rated speed rpm : 250 CRT mm min. :> 8.60	Check :> 80
Testing:	- Check - speed 1/min : < 320
Rated speed rpm : 360 rack travel mm : 6.40	FUEL DELIVERY CHARACTERISTICS
Tolerance mm : +- 0.10	+
Rated speed rpm : 350	Aneroid pressure hPa: 1500 Rated speed rpm: 750
TORQUE CONTROL Rated speed rpm : 1250 rack travel mm : 13.70 Tolerance mm : + 0.05	<pre>Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 3.0</pre>
Rated speed rpm : 750 rack travel mm : 12.20 Tolerance mm : + 0.10	Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance
Rated speed rpm : 650 rack travel mm : 11.70 Tolerance mm : + 0.15	+ cm3/1000 strokes : 12.0 + Check tolerance + cm3/1000s. : 16.0
ANEROID/ALTITUDE COMPENSATOR TEST	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 97.0
SETTING	+ Tolerance + cm3/1000 strokes : + 2.0
Rated speed rpm : 1250 Pressure hPa : 1500 rack travel mm : 13.70 Tolerance mm : + 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm : 1250 Pressure hPa : - rack travel mm : 9.80 Tolerance mm : + 0.20	STARTING FUEL DELIVERY Set starting CRT at K-cam.

Rated speed rpm rack travel mm Tolerance mm	: +-	100 9.90 0.50
Del. quantity cm3/1000 strokes	:	75.0
Tolerance cm3/1000 strokes Check tolerance	: +-	20.0
cm3/1000s.	; +-	24.0

LOW IDLE

Rated speed rpm	:		360
Rack travel in mm Tolerance mm	:	+	6.40 0.10
Del. quantity cm3/1000 strokes Tolerance	:		25.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/100CS. Spreed	:	+-	6.0
Tolerance			
cm3/1000 strokes	:		7.0
Check tolerance cm3/1000s.	:		11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.07.97 : ISO 4113

Combination No.

: 9 400 087 500

Injection pump

Pump designation : PES6P12DA720LS7257

: -10

EP type number

: 9 400 087 086

Governor

Governer design. : RQV300...950PA1242

+ 9 420 080 387 Governer no.

Cust. part No. : 0260746602

Customer-spec. information

Customer : MBB

Motor

: OM 447 LA

Power KW

: 264.8

TEST BENCH REQUIREMENTS

: 4.1 Intet line

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

2.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

: 208.5

Toterance bar

: +- 1.5

Test lines

: 1 680 750 075

Outside diameter :

8.0

x inside diameter: 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

4.65

Tolerance mm

: + - 0.05

Check

tolerance mm

: +- 0.10

Rack travel in mm: 21.00

Firing order

: 6-12-14-1-5-

: 0-60-120-180-240 Phasing

: -300

Tolerance

: +- 8,98

Check

tolerance "NW

: +- 0.75

BASIC SETTING

Rated speed rpm :

600

Rack travel in mm : 14.25 : +- 0.05 Toterance mm

Del. quantity

cm3/1000 strokes :

275.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.97 : ISO 4113

Combination No. : 0 402 746 602

Injection pump

Pump designation : PES6P120A320RS7359

: -1

EP type number : 0 412 726 949

Governor

Governer design. : RQ275/1050PA1217-1

Governer no. : 0 421 801 798

Cust. part No. : CCEP 5152A 66-229

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDRO62045 R41

Power KW

223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : ← 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 4.70 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: + 0.50 Tolerance

Check

tolerance °NW : → 0.75

Start of delivery mark

*NW after s.o.d. : -0.45 Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm: 13.40 Tolerance mm : + 0.05

BASIC SETTING

1	Tolerance mm : +- 0.10
Rated speed rpm : 600	Total artice limit
<u> </u>	Rated speed rpm : 401
Tolerance mm : +- 0.05	guide sleeve
Del	travel mm : 5.00
Del. quantity + cm3/1000 strokes : 285.0 +	Tolerance mm : +- 0.10
T 2000 30 000 30 000 T	Rated speed rpm : 480
Tolerance	guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 6.00
	Tolerance mm : +- 0.10
Sheck tolerance +	
cm3/1000s. : +- 4.0 +	Rated speed rpm : 1330
Spaced	guide sleeve travel mm : 11.50
Spreed	Tolerance mm : + 0.50
Tolerance	Total alice man
cm3/1000 strokes : 5.0	
+	GUIDE SLEEVE POSITION
Check tolerance +	
cm3/1000s. : 9.0	control lever
	position degree : 109
\mathcal{I}	Rated speed rpm : 600
Rated speed rpm : 300	Nation open i piii i ooo
+	Rack travel in mm : 20.00
Rack travel in mm: -7.60	Tolerance mm : +- 0.80
Tolerance mm : + 0.10	
Del. quantity	
cm3/1000 strokes : 23.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance + 2.0 +	Rated speed rpm : 600
Check tolerance	Aneroid pressure
cm3/1000s. : + 5.0	hPa : 1000
Spreed	Del. quantity
Tolerance	cm3/1000 strokes : 285.0
cm3/1000 strokes : 8.0 +	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : 12.0	Check tolerance cm3/1000s. : +- 4.0
I	cm3/1000S. : +- 4.0 Spreed
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR	cm3/1000 strokes : 5.0
+	Check tolerance
	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	
Poted apped ppm + 1122	
Rated speed rpm : 1122 + guide sleeve +	CONTROL LEVER
travel mm : 6.36	COLATIVOE FEAFIX
Tolerance mm : + 0.15	control lever
+	position degree : 276.0
Rated speed rpm : 300	tolerance degree : +- 4.0
guide sleeve +	
travel mm : 2.18 +	RATED SPEED
Tolerance mm : +- 0.20	rack travel mm : -1.00
Rated speed rpm : 1050	Rated speed rpm : 1115 Tolerance 1/min : +- 15
Rated speed rpm : 1050 + guide sleeve +	Tolerance 1/min : +- 15
travel mm : 6.00	rack travel mm : -9.40
1. 4.70 mm (4.00)	. To real times of the real times of times of the real times of ti

Rated speed rpm : 1240 Tolerance 1/min : +- 5 rack travel mm : -12.90 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE control lever position degree : 255.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > -4.90Testing: 300 Rated speed rpm : : -7.60 rack travel mm : +- 0.10 Tolerance mm rack travel mm : -11.30 Rated speed rpm : 395 Tolerance 1/min : +-TORQUE CONTROL : 600 Rated speed rpm : +- 0.05 Tolerance mm Rated speed rpm : 1050 Tolerance mm : \leftarrow 0.10 ANFROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000 500 Rated speed rpm Pressure hPa -2.45rack travel mm Tolerance mm : + 0.20 **MEASUREMENT**

Pressure hPa : 400 rack travel mm : -0.70 : +- 0.15 Tolerance mm : 240 : -1.65 Pressure hPa rack travel mm Tolerance mm : + 0.05 Start interlock Rated speed rpm :> 100 Rated speed rpm : < 195 Check speed 1/min :> 80 Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 293.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s.: +- 6.0 Aneroid pressure Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 174.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm :

500

Rated speed rpm	:		300
Rack travel in mm Tolerance mm Del. quantity	:	+	-7.60 0.10
cm3/1000 strokes	:		23.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.07.97 Test oil : ISO 4113

Combination No. : 0 402 746 608

Injection pump

Pump designation : PES6P12OA32ORS7359 EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1275 Governer no. : 0 421 801 805

Cust. part No. : CCEP 5157A 66-222

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDR062045 F/C41

Power KW : 152.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 220 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

*NW after s.o.d. : -0.95

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 11.70 Tolerance mm : +- 0.05	+ Rated speed rpm : 1050 + guide sleeve + travel mm : 6.70
BASIC SETTING	Tolerance mm : +- 0.10
Rated speed rpm : 1050	Rated speed rpm : 648 guide sleeve
Del. quantity cm3/1000 strokes : 176.0	travel mm : 6.18 Tolerance mm : + 0.10
Tolerance	Rated speed rpm : 375 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 5.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 450
Spreed	+ guide sleeve + travel mm : 6.00 + Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1300
Check tolerance cm3/1000s. : 9.0	<pre>+ guide sleeve + travel mm : 11.50 + Tolerance mm : +- 0.50</pre>
	Rated speed rpm : 873
Rated speed rpm : 275	+ guide sleeve + travel mm : 6.52 + Tolerance mm : +- 0.10
Rack travel in mm : -6.10 Tolerance mm : + 0.10	GUIDE SLEEVE POSITION
Del. quantity cm3/1000 strokes : 28.0 Tolerance	T GOIDE SLEEVE POSITION
cm3/1000 strokes : +- 2.0 Check tolerance	control lever position degree : 109
cm3/1000s. : +- 5.0 Spreed Tolerance	Rated speed rpm : 500 Rack travel in mm : 20.00
cm3/1000 strokes : 8.0 Check tolerance	Tolerance mm : +- 0.80
cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1050 Aneroid pressure
	hPa : 1000 Del. quantity
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 176.0 Tolerance
Rated speed rpm : 1122 guide sleeve	cm3/1000 strokes : + 1.0 Check tolerance
travel mm : 7.06 Tolerance mm : + 0.15	- cm3/1000s. : +- 4.0 - Spreed - Tolerance
Rated speed rpm : 275 guide sleeve	- cm3/1000 strokes : 5.0 Check tolerance
travel mm : 2.44 Tolerance mm : +- 0.20	cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 276.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : -1.00
Rated speed rpm : 1115
Tolerance 1/min : +- 5

rack travel mm : -7.70
Rated speed rpm : 1205
Tolerance 1/min : +- 15

rack travel mm : -11.20
Tolerance mm : + 0.50
Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 256.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : < -4.20

Testing:

Rated speed rpm : 275 rack travel mm : -6.10 Tolerance mm : +- 0.10

rack travel mm : -9.60 Rated speed rpm : 375 Tolerance 1/min : +- 20

TORQUE CONTROL

Rated speed rpm : 1050

Rated speed rpm : 600 rack travel mm : 1.00 Tolerance mm : + 0.10

Rated speed rpm : 800 rack travel mm : 0.80 Tolerance mm : + 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 1.00
Tolerance mm : +- 0.10

Rated speed rpm : 500
Pressure hPa : rack travel mm : -0.75
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 280 rack travel mm : 0.65 Tolerance mm : + 0.15

Pressure hPa : 160 rack travel mm : -0.15 Tolerance mm : +-0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 195

Check

speed 1/min : > 80 Check speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 600 Del. quantity

cm3/1000 strokes : 193.0

Tolerance

cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity
cm3/1000 strokes : 149.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275 Rack travel in mm: -6.10Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000S. : ← 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 746 6090

Injection pump

Pump designation : PES6P130A720RS7411 EP type number : 0 412 736 808

Governor

Governer design. : RQ275/950PA1274 Governer no. : 0 421 801 807

Cust. part No. : 221 575

Customer-spec. information Customer : RABA

Motor : siehe Bemerkung

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 har Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 5.50 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm: : +- 0.50

Firing order : 1-5-3-6-2-

: 0-50-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.10 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 263.0

Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 6.00
	+ Tolerance mm : + 0.10
Check tolerance	+
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1290
	+ guide sleeve
Spreed	+ travel mm : 11.50
	+ Tolerance mm : + 0.50
Tolerance	+
cm3/1000 strokes : 5.0	
	→ GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 9.0	+ Rated speed rpm : 1143
	1
	+ Rack travel in mm : 12.10
	+ Tolerance mm : +- 1.30
Rated speed rpm : 275	+
Rack travel in mm : 4.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.10	+
Del. quantity	Rated speed rpm : 600
cm3/1000 strokes : 24.0	+ Aneroid pressure
Tolerance	+ hPa : 1500
cm3/1000 strokes : +- 3.0	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 263.0
cm3/1000s. : +- 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 8.0	+ cm3/1000s. : +- 4.0
Check tolerance	Spreed
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : 5.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	
WITH GOAFWOOK	1
GUIDE SLEEVE TRAVEL	+ CONTROL LEVER
	1
Rated speed rpm : 1103	+ control lever
guide steeve	position degree : 34.0
travel mm : 6.54	+ tolerance degree : +- 4.0
Tolerance mm : + 0.15	1
र प्रकार आरोपका पासर । प्रकार का क्षेत्र रहे । जा कर रहे । जा क	+ control lever
Rated speed rpm : 275	position degree : 95.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 2.06	1
Tolerance mm : + 0.20	+ RATED SPEED
1 01EO	+ rack travel mm : 12.10
Rated speed rpm : 1050	Rated speed rpm : 1095
guide sleeve	+ Tolerance 1/min : + 5
travel mm : 6.00	1 Total and Chillin
Tolerance mm : +- 0.10	rack travel mm : 4.00
TOTAL MILE IN THE U. IU	Rated speed rpm : 1190
Rated speed rpm : 355	+ Tolerance 1/min : + 15
	I local alice 1/11/11 . The 13
guide sleeve travel mm : 4.25	rack travel mm : 0.50
	+ Tolerance mm : + 0.50
Tolerance mm : +- 0.10	+ Rated speed rpm : 1300
Rated speed rpm : 450	I waten sheen thin : 1200
Rated speed rpm : 450	Т

LOW IDLE

control lever

position degree : 73.0 tolerance degree : +- 4.0

control lever

position degree : 11.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. : > 6.80

Testing:

Rated speed rpm : 275
rack travel mm : 4.20
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 335
Tolerance 1/min : + 20

TORQUE CONTROL

Rated speed rpm : 600 rack travel mm : 13.10 Tolerance mm : + 0.05

Rated speed rpm : 1050 rack travel mm : 13.10 lclerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 13.10
Tolerance mm : +- 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 8.20
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 380 rack travel mm : 9.85 Tolerance mm : + 0.15

Pressure hPa : 600 rack travel mm : 12.05 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 252.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1900s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 147.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : -4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm : 100 rack travel mm : 20.50

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 275

011

Rack travel in mm Tolerance mm	:	+-	4.20 0.10
Del. quantity cm3/1000 strokes Tolerance	:		24.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s. Spreed	:	+	6.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.97 : ISO 4113 Edition Test oil

Combination No. : 0 402 746 650

Injection pump

Pump designation : PES6P120A320RS7344

EP type number : 0 412 726 914

Governor

Governer design. : RQ275/1050PA999-6

Governer no. : 0 421 801 785

Cust. part No. : CCEP 5151A 66-230

Customer-spec. information

Customer : RENAULT V.I. Motor : MIDR 062045 M41 Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 145
Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 11.00 Tolerance mm : +-0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

*NW after s.o.d. : -0.15

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

: 21.00

and maximum rack

travel : 11.00 Difference ° CS : 2.25

Rack travel in mm : 11.60 Tolerance mm : + 0.05 BASIC SETTING Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 287.0 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38 Tolerance mm : + 0.10		
Tolerance mm : + 0.05 BASIC SETTING Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 287.0 Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : - 2.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CRT ZERO POSITION		
Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 287.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : + 5.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38		: 11.60 : + 0.05
Del. quantity cm3/1000 strokes : 287.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	BASIC SETTING	
Tolerance cm3/1000 strokes : 287.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	Rated speed rpm	: 600
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : 2.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38		: 287.0
cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38		: + 1.0
Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 275 Rack travel in mm : -7.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38		: + 4.0
Check tolerance cm3/1000s.: 9.0 Rated speed rpm: 275 Rack travel in mm: -7.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 37.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s.: + 5.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1131 guide sleeve travel mm: 6.38	Spreed	
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Rack travel in mm: -7.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 37.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1131 guide sleeve travel mm: 6.38		: 9.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 37.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	Rated speed rpm	: 275
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cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38		: +- 2.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	cm3/1000s.	: +- 5.0
Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	Tolerance	: 8.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1131 guide sleeve travel mm : 6.38	Check tolerance	
Rated speed rpm : 1131 guide sleeve travel mm : 6.38		JECTION PUMP
guide sleeve travel mm : 6.38	GUIDE SLEEVE TRAVE	EL
travel mm : 6.38		: 1131
TOLERANCE NAME : TO U. TO		: 6.38 : + 0.10

Rated speed rpm guide sleeve	: 275
travel mm Tolerance mm	: 0.80 : + 0.10
Rated speed rpm guide sleeve	: 1050
travel mm Tolerance mm	: 6.00 : + 0.10
Rated speed rpm guide sleeve	: 396
travel mm Tolerance mm	: 2.99 : +- 0.10
Rated speed rpm guide sleeve	: 550
travel mm Tolerance mm	: 6.00 : +- 0.10
Rated speed rpm	: 1350
guide sleeve travel mm Tolerance mm	: 11.50 : + 0.50
GUIDE SLEEVE POSI	TION
control lever	• 100
control lever position degree Rated speed rpm	
position degree	: 600
position degree Rated speed rpm Rack travel in mm Tolerance mm	: 600 : 20.00
position degree Rated speed rpm Rack travel in mm Tolerance mm	: 600 : 20.00 : + 0.80
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000 : 287.0
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000 : 287.0 : + 1.0
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000 : 287.0
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000 : 287.0 : + 1.0
position degree Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 600 : 20.00 : + 0.80 Y AT FULL LOAD STOP : 600 : 1000 : 287.0 : + 1.0 : + 4.0

CONTROL LEVER

control lever position degree tolerance degree	: 274.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: -1.00 : 1135 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 1240
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 251.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: < -5.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : -7.00 : +- 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: -9.50 : 365 : +- 20
TORQUE CONTROL Rated speed rpm	: 600
Rated speed rpm Tolerance mm	: 1050 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1000

: +	500 -3.6 -0.3 500 560 -1.6 -0.7 320 -2.7 -0.1	25 15 75 05	
: : + : : + : : : : : : : : : : : : : :	500 560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: + : : + : : + : : : : : : : : : : : :	500 560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: : + : : +	500 560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: : + : : +	500 560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: + : + : : + : : : : : : : : : : : : :	560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: + : + : : + : : : : : : : : : : : : :	560 -1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: +	-1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: +	-1.7 - 0.7 320 -2.7 - 0.0	25 15 75 05	
: +	320 -2.1 - 0.0	75 05 	
: +	320 -2.7 - 0.0	75 05	
: +	-2.1 - 0.0 -	75 05 	
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RACT	ERIST.	ICS	
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	: : + : +	: 1000 : 1050 : 280 : + 3 : + 6 : 500 : 114 : + 1	: 1000 : 1050 : 280.0 : + 3.0 : + 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : **←** 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm: -7.00 : +- 0.10 Tolerance mm Del. quantity

cm3/1000 strokes : 37.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spread

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 746 986

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number : 0 412 726 893

Governor

Governer design. : RQ275/1050PA1021-3

Governer no. : 0 421 801 677

Cust. part No. :

Customer-spec. information : IVECO-UNIC Customer

: 8460.41.731 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

140 min. L/h Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

rest pressure bar : 26.0 Tolerance bar : - 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery mark

Check

tolerance *NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.65 Tolerance mm : + 0.05

Del. quantity + cm3/1000 strokes : 221.0 +	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Spreed	CIII 10003 9.0
Tolerance cm3/1000 strokes : 5.0	RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1103
Check tolerance cm3/1000s. : 9.0	Tolerance 1/min : + 8 rack travel mm : 4.00
	Rated speed rpm : 1175 Tolerance 1/min : + 15
Rated speed rpm : 275	rack travel mm : 0.50
Rack travel in mm : 5.00 + Tolerance mm : +- 0.10 + Del. quantity	Tolerance mm : +- 0.50 Rated speed rpm : 1350
cm3/1000 strokes : 23.0 +	
cm3/1000 strokes : +- 3.0 +- Check tolerance +-	LOW IDLE
cm3/1000s. : +- 6.0 +	LOW IDEE
Tolerance	<pre>control lever position degree : 72.0 tolerance degree : +- 4.0</pre>
12.0	Setting point w/out bumper spring
(3) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 100
	CRT mm min. : > 6.50
GUIDE SLEEVE POSITION	Testing:
control lever	Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10
position degree : 109 + Rated speed rpm : 600 +	rack travel mm : 2.00
Rack travel in mm: 20.00 + Tolerance mm: + 0.80	Rated speed rpm : 355 Tolerance 1/min : + 20
	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 +	Rated speed rpm : 1050 rack travel mm : 12.65 Tolerance mm : + 0.05
Aneroid pressure hPa : 1200	Rated speed rpm : 600
Del. quantity cm3/1000 strokes : 221.0	rack travel mm : 12.70 Tolerance mm : +- 0.10

ANEROID/ALTI	TUDE
COMPENSATOR	TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 12.65
Tolerance mm : +- 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 7.70
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 290 rack travel mm : 8.90 Tolerance mm : + 0.20

Pressure hPa : 580 rack travel mm : 11.35 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 215

Check

speed 1/min :> 80 Check speed 1/min : < 235

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 261.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 7.0

Aneroid pressure

hPa : Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Det. quantity

cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000S. : +- 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 5.00
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000S. : +- 6.0 Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 23.07.97 : ISO 4113

Combination No. : 0 402 796 820

Injection pump

Pump designation : PES6P120A720LS7410

EP type number : 0 412 726 957

Governor

Governer design. : RE30

Governer no. : 0 421 890 038

Cust. part No. : 0260744902

Customer-spec. information Customer : MTU
Motor : 6-RPower KW : 441

: 6-R-183 : 441.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance *C : +-

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

Pump-specific values in Section (B)

must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm

Tolerance mm

: 4.05 : + 0.05

Check

tolerance mm

: +- 0.10

Rack travel in mm : 20.00

Tolerance mm : +- 1.00

Firing order : _6- 2- 4- 1- 5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance *NW

: +- 0.75

Start of delivery mark

Barrel no. : 6

(B) POSITIONER TESTING

Warm-up time: 3 minutes at

n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

Engine speed min-1:

0

Setting point (P, R and H pump) Uact V 3.100 13.00 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V : CRT mm 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Setting point (gmuq M) 3.100 Uact V : 12.50 CRT mm Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V : 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1150 Uact V 3.500 vel. quantity cm3/1000 strokes : 362.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 FUEL DELIVERY CHARACTERISTICS Rated speed rpm 750 Uact V 3.500 Del. quantity cm3/1000 strokes : 423.0 Tolerance cm3/1000 strokes : +- 4.0Check tolerance cm3/1000s. : + 6.0 TEST POINT L1 Rated speed rpm : 350 1.340 Uact V : +- 0.060Tolerance Volt Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +- 3.0Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 End of test specification sheet

: +/- 0.6

: +/- 1.20

Tolerance V

tolerance V

Check

Test with control rod in stop position

Engine speed min-1:
Amplitude V :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 846 081

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...950PA1355K

Governer no. : 0 421 815 962

Cust. part No. : 11127026

: -P03 v.04.97

Customer-spec. information Customer . VCE

Motor : TD122KLE Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. `C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 150 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Tolerance mm : \leftarrow 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 12.80

022

Tolerance mm : +- 0.05	guide sleeve travel mm : 4.00
Del. quantity cm3/1000 strokes : 260.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1280 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : +- 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1 Rated speed rpm : 1130
Check tolerance : 11.0	Rack travel in mm: 11.62 Tolerance mm: + 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 7.00 Tolerance mm: + 0.10	Rated speed rpm : 950 Aneroid pressure hPa : 1500
Del. quantity cm3/1000 strokes : 80.0 Tolerance	Del. quantity cm3/1000 strokes : 260.0
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed Tolerance	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes : 5.0 + Check tolerance cm3/1000s. : 8.0 + Check tolerance cm3/1000s.	Tolerance cm3/1000 strokes : 8.0 Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : 11.0
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 64.0
Rated speed rpm : 1037 guide sleeve	tolerance degree : +- 4.0
travel mm : 9.86 Tolerance mm : + 0.15	control lever position degree : 118.0 tolerance degree : +- 4.0
Rated speed rpm : 300 + guide sleeve + -	RATED SPEED
travel mm : 1.61 Tolerance mm : + 0.20	rack travel mm : 11.80 Rated speed rpm : 1015 Tolerance 1/min : +- 5
Rated speed rpm : 773 guide sleeve	rack travel mm : 4.00
travel mm : 6.81 Tolerance mm : + 0.25	Rated speed rpm : 1110 Tolerance 1/min : +- 15
Rated speed rpm : 500	rack travel mm : 0.50

Tolerance mm Rated speed rpm	: +- 0.50 : 1210	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	10.40
LOW IDLE		MEASUREMENT	
control lever		Rated speed rpm	: 800
position degree tolerance degree	: 71.0 : + 4.0	Pressure hPa rack travel mm Tolerance mm	: 700 : 2.60 : + 0.20
control lever position degree tolerance degree Setting point w/o	: +- 4.0	Pressure hPa rack travel mm Tolerance mm	
Rated speed rpm	· · · · · ·		
,	: > 9.00	FUEL DELIVERY CHA	RACTERISTICS
Testing:		Aneroid pressure	: -
Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.00	Rated speed rpm Del. quantity	
		+ cm3/1000 strokes † Tolerance	
Rated speed rpm	: 400	cm3/1000 strokes Check tolerance	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 12.80 : + 0.05 : 800 : 13.40 : + 0.10 : 850 : 13.10 : + 0.10	- cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 220.0 : +- 1.0
Rated speed rpm rack travel mm Tolerance mm	: 12.20 : +- 0.20	STARTING FUEL DEL Rated speed rpm rack travel mm	: 100
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : 1500 : 13.40 : ← 0.10	Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 0.30 : 165.0 : +- 15.0

: + 0.20
: 800
: 700 : 2.60 : + 0.20
: 260 : 0.25 : + 0.05
RACTERISTICS
: 800
: 300.0
: ← 4.0
: +- 8.0
: 500 : 220.0 : + 1.0 : + 4.0
IVERY
: 100 : 10.40 : + 0.30 : 165.0 : + 15.0 : + 19.0

LOW IDLE

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	: +-	7.00 0.10	
cm3/1000 strokes Tolerance	:	80.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	•	5.0	

: 8.0

End of test specification sheet

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.97 : ISO 4113

Combination No. : 0 402 946 013

Injection pump

Pump designation : PES6P120A320RS8028

EP type number : 0 412 926 021

Governor

Governer design. : RQV275...1250PA1189K

Governer no. : 0 421 815 974

Cust. part No. : CCEP 5146A 66-220

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 06.02.26Y41 Motor

Power KW : 184.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

remp. TC :
Tolerance *C : : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar

Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

· + 0.50 Tolerance

Check

: +- 0.75 tolerance "NW

Start of delivery mark

*NW after s.o.d. : -0.25 : +- 0.50 Tolerance

Check

tolerance "NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

: 21.00 mm

and maximum rack

11.00 travel

	t	Rated speed rpm	: 275
		guide sleeve	
CRT ZERO POSITION	+	travel mm	: 1.10
	†	Tolerance mm	: + 0.25
Rack travel in mm		Rated speed rpm	: 912
Tolerance mm	: ← 0.05 +	guide sleeve	
	1	travel mm	: 6.79
		Tolerance mm	: +- 0.25
BASIC SETTING	+		
	4359	Rated speed rpm	: 412
ated speed rpm	: 1250 +	guide sleeve	
		travel mm	: 2.53
el. quantity	+	Tolerance mm	: +- 0.25
m3/1000 strokes	: 276.0 +		
		Rated speed rpm	: 462
olerance	+	guide sleeve	
m3/1000 strokes	: 1.0	travel mm	3.16
	1	Tolerance mm	: +- 0.25
heck tolerance		TOTAL BLICE WILL	0.27
m3/1000s.	: +- 4.0	Datad annad	: 550
11D/ (UUU) .	; 	Rated speed rpm	• 550
		guide sleeve	
preed	+	travel mm	: 3.97
	+	Tolerance mm	: +- 0.25
olerance	+		
m3/1000 strokes	: 5.0	Rated speed rpm	: 1630
	1	guide sleeve	
heck tolerance		travel mm	: 13.50
	: 9.0		
m3/1000s.	; 9.0	Tolerance mm	: ← 0.50
ated speed rpm ack travel in mm	: -7.40	control lever	. 4
olerance mm	: + 0.10	position degree	
el. quantity	+	Rated speed rpm	: 1420
m3/1000 strokes	: 47.0		
olerance	+	Rack travel in m	m : 13.50
m3/1000 strokes	: + 2.0	Tolerance mm	: 1.50
heck tolerance	1		
m3/1000s.	: + 6.0		
preed	1	FULL LOAD DELIVE	RY AT FULL LOAD STOP
olerance	${ m I}$. ACT FOLIA AFFTAF	THE TOLL LOND OF OF
m3/1000 strokes	: 8.0	Dated speed nom	: 1250
heck tolerance	. 0.0 +	Rated speed rpm	
		Amanaid asassura	
	+	Aneroid pressure	
	: 12.0	hPa	: 1600
	+	hPa Del. quantity	: 1600
m3/1000s.	: 12.0	hPa Del. quantity cm3/1000 strokes	: 1600
m3/1000s.	: 12.0	hPa Del. quantity cm3/1000 strokes Tolerance	: 1600 : 276.0
m3/1000s. B) SETTING OF IN.	: 12.0	hPa Del. quantity cm3/1000 strokes	: 1600 : 276.0
m3/1000s. B) SETTING OF IN.	: 12.0	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1600 : 276.0
m3/1000s. B) SETTING OF IN.	: 12.0	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1600 : 276.0 : ← 1.0
m3/1000s. B) SETTING OF INJ ITH GOVERNOR	: 12.0 JECTION PUMP	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1600 : 276.0
m3/1000s. B) SETTING OF INJ ITH GOVERNOR	: 12.0 JECTION PUMP	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1600 : 276.0 : ← 1.0
3/1000s. SETTING OF IN. ITH GOVERNOR JIDE SLEEVE TRAVE	: 12.0 JECTION PUMP	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1600 : 276.0 : + 1.0 : + 4.0
m3/1000s. B) SETTING OF IN. ITH GOVERNOR JIDE SLEEVE TRAVE	: 12.0 JECTION PUMP	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1600 : 276.0 : + 1.0 : + 4.0
m3/1000s. B) SETTING OF IN. ITH GOVERNOR UIDE SLEEVE TRAVE ated speed rpm uide sleeve	: 12.0 JECTION PUMP EL : 1332	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1600 : 276.0 : + 1.0 : + 4.0 : 5.0
m3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE TRAVE (ated speed rpm) uide sleeve	: 12.0 JECTION PUMP EL : 1332 : 10.07	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1600 : 276.0 : + 1.0 : + 4.0
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm	: 12.0 JECTION PUMP EL : 1332	hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1600 : 276.0 : + 1.0 : + 4.0 : 5.0

		† SETTING	
CONTROL LEVER		+ Rated speed r + Pressure hPa + Tolerance mm	: 1600
position degree tolerance degree		+ Rated speed r + Pressure hPa	
RATED SPEED rack travel mm Rated speed rpm		rack travel m Tolerance mm	
Tolerance 1/min	· ·	+ MEASUREMENT	40.50
rack travel mm Rated speed rpm Tolerance 1/min		+ Rated speed r + Pressure hPa	
rack travel man Tolerance mm	: -13.90 : +- 0.50	rack travel m	nm : -3.60
Rated speed rpm	· · · -	Pressure hPa rack travel m Tolerance mm	nn : -1.60
LOW IDLE		Start interlo	ock
control lever position degree tolerance degree		Rated speed r Rated speed r Check	rpm : < 240
Testing:		+ speed 1/min + Check + speed 1/min	
Rated speed rom rack travel mm Tolerance mm	: 275 : -7.40 : +- 0.10	İ	CHARACTERISTICS
Rated speed rpm	: 200	Aneroid press	ure
CRT mm max.	: < -6.60	hPa Rated speed r	: 1600
Rated speed rpm	: 380	Del. quantity	
TORQUE CONTROL Rated speed rpm	: 1250	Tolerance cm3/1000 stro Check tolerar cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 800 : −0.75 : + 0.10	Aneroid press	
Rated speed rpm rack travel mm Tolerance mm	: 350 : -4.10 : +- 0.25	+ hPa + Rated speed r Del. quantity + cm3/1000 stro + Tolerance + cm3/1000 stro	okes : 181.0
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerar cm3/1000s.	

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 95.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm: -7.40
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes :

Tolerance cm3/1000 strokes : +- 2.0

47.0

Check tolerance

cm3/1000s. : + 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.97 Test oil : ISO 4113

Combination No. : 0 402 996 002

Injection pump

Pump designation : PE6P120A720LS8032 EP type number : 0 412 926 023

Governor

Governer design. : RE30

: 0 421 890 025 Governer no.

: 1364497 Cust. part No.

Customer-spec. information : SCANIA Customer : DSC1201 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 : **←** 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

3.85 Prestroke mm : + 0.05 Tolerance mm

Check

: ← 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 180.00 Tolerance : + 0.50

Check

: **←** 0.75 tolerance °NW

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (P, R and H pump) Uact V 1.700 CRT mm 6.15 : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Setting point (M pump) 3.100 Uact V 12.50 CRT mm Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm Tolerance mm : +/- 0.25 Check

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20

Difference Amplitude to

Engine speed min-1:

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

600

TEST POINT V1

Rated speed rpm 700 Uact V 3.400 Del. quantity cm3/1000 strokes : 365.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s.Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance

950 Rated speed rpm Uact V 3.400 Del. quantity cm3/1000 strokes : 322.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : + 10.0

FUEL DELIVERY CHARACTERISTICS

TEST POINT L1

cm3/1000s.

250 Rated speed rpm Uact V 1,400 Tolerance Volt : +- 0.060 Check tolerance Volt : + - 0.060Del. quantity

cm3/1000 strokes : 16.0

tolerance mm

Tolerance cm3/1000 strokes : +- 3.0 Spreed Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 474 021

Injection pump

Pump designation : PES4MW100/720RS1181

EP type number : 0 413 404 107

Governor

Governer design. : RSV400...1000MW1A348

Governer no. : 0 420 085 183

Cust. part No. : 9880882

Customer-spec. information

Customer : LIEBHERR
Motor : D924T-E A2

Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.20

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 176.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed	+	Tolerance	
	+	cm3/1000 strokes	: 4.0
Tolerance	†	Check tolerance	3 6
cm3/1000 strokes :	4.0	cm3/1000s.	: 7.5
Check tolerance	I		
cm3/1000s.	7.5		
_	+	CONTROL LEVER	
	+		
	± +	control lever	04.0
Rated speed rpm :	550	position degree tolerance degree	
Rack travel in mm :	4.50 I	toterance degree	4.0
	+ 0.20	RATED SPEED	
Del. quantity	+	rack travel mm	: 12.20
cm3/1000 strokes :	25.0	Rated speed rpm	: 915
Tolerance		Tolerance 1/min	:
cm3/1000 strokes : Check tolerance	+ 2.0	rack travel mm	: 4.00
cm3/1000s. :	+ 4.5 I	Rated speed rpm	: 975
Spreed	1	Tolerance 1/min	: + 10
Tolerance	+		
cm3/1000 strokes :	3.5	rack travel mm	: 1.00
Check tolerance	5.0	Tolerance mm	: +- 0.70 : 1100
cm3/1000s. :	3.0	Rated speed rpm	: 1100
	1	rack travel mm	: 4.00
(B) SETTING OF INJECT	CTION PUMP	Rated speed rpm	: 980
WITH GOVERNOR	+	Tolerance 1/min	: +- 10
	+		
	†		
GUIDE SLEEVE POSITIO			
GUIDE SLEEVE POSITION		LOW IDLE	
	JN +	LOW IDLE	
control lever	_		
control lever position degree :	-3	control lever	. 70 0
control lever	_	control lever	: 78.0 : + 4.0
control lever position degree : Rated speed rpm :	- 3 800	control lever	
control lever position degree : Rated speed rpm :	-3	control lever	: + 4.0
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm :	- 3 800 0.65	control lever position degree tolerance degree Setting point w/ou	: + 4.0 ut bumper spring
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm :	- 3 800 0.65	control lever position degree tolerance degree Setting point w/ou Rated speed rpm	: + 4.0 ut bumper spring : 550
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension	- 3 800 - 0.65 + 0.35	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm	: + 4.0 ut bumper spring : 550 : 4.10
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm :	- 3 800 0.65	control lever position degree tolerance degree Setting point w/ou Rated speed rpm	: + 4.0 ut bumper spring : 550
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension	- 3 800 - 0.65 + 0.35	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm	: + 4.0 ut bumper spring : 550 : 4.10
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension	- 3 800 - 0.65 + 0.35	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A	- 3 800 - 0.65 + 0.35 - 3.75 - AT FULL LOAD STOP	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A	- 3 800 - 0.65 + 0.35	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min.	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure	- 3 800 - 0.65 + 0.35 - 3.75 - AT FULL LOAD STOP 900	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa :	- 3 800 - 0.65 + 0.35 - 3.75 - AT FULL LOAD STOP	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing:	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : > 19.00
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure	- 3 800 - 0.65 + 0.35 - 3.75 - AT FULL LOAD STOP 900	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min.	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : 19.00 : 550 : 4.50
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance	- 3 800 - 0.65 + 0.35 3.75 AT FULL LOAD STOP 900 1250 176.0	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : > 19.00 : 550
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes :	- 3 800 - 0.65 + 0.35 - 3.75 - AT FULL LOAD STOP 900 1250	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : 19.00 : 550 : 4.50
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : Check tolerance	- 3 800 - 0.65 + 0.35 3.75 AT FULL LOAD STOP 900 1250 176.0 + 1.0	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : 19.00 : 550 : 4.50
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. :	- 3 800 - 0.65 + 0.35 3.75 AT FULL LOAD STOP 900 1250 176.0	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : > 19.00 : 550 : 4.50 : + 0.20
control lever position degree : Rated speed rpm : Rack travel in mm : Tolerance mm : governor spring pre-tension click setting x : FULL LOAD DELIVERY A Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : Check tolerance	- 3 800 - 0.65 + 0.35 3.75 AT FULL LOAD STOP 900 1250 176.0 + 1.0	control lever position degree tolerance degree Setting point w/ou Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 550 : 4.10 : + 0.10 : 100 : 19.00 : 550 : 4.50

Tolerance mm	: + 0.05	+	Aneroid pressure	
	500	+	hPa	: 1250
Rated speed rpm rack travel mm	; 500	†	Rated speed rpm	: 600
rack travel mm Tolerance mm	: +- 0.10	Ī	Del. quantity cm3/1000 strokes	• 180 0
TOTAL GITTE HAIL	, , , , , , , , , , , , , , , , , , , ,	I	Tolerance	. 160.0
Rated speed rpm	: 600	1	cm3/1000 strokes	: +- 2.0
rack travel mm	13.25	1	Check tolerance	
rack travel mm Tolerance mm	: +- 0.10	+	cm3/1000s.	: ← 5.0
		+		
AMEROTA (AL TITURE			Au	
ANEROID/ALTITUDE COMPENSATOR TEST		Ī	Aneroid pressure hPa	
COMPENSATOR TEST		I	Rated speed rpm	550
		1	Del. quantity	. 330
SETTING		1	cm3/1000 strokes	: 156.0
		+	Tolerance	
Rated speed rpm	: 550	+	cm3/1000 strokes	: +- 1.0
Pressure hPa rack travel mm	: -	+	Check tolerance	
rack travel mm	: 12.20	+	cm3/1000s.	: + 4.0
Tolerance mm	: +- 0.05	†		
Pated speed nom	: 550	1		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	1250	I	STARTING FUEL DEL	TVFRY
rack travel mm	: 1250 : 13.20	1	01/11/12/10 1022 022	
Tolerance mm	: +- 0.05	1	ESS test: With 2	4 V solenoid activated,
		1		start position in max.
MEASUREMENT		+	control lever se	tting.
	550	+		
Rated speed rpm	: 550	†		
Pressure hPa	: 550	Ī	Rated speed rpm	. 100
rack travel mm		I	rack travel mm	
Tolerance mm		1	Tolerance mm	: +- 1.00
		1	Del. quantity	
Pressure hPa		+	cm3/1000 strokes	: 135.0
rack travel mm		+	Tolerance	
Tolerance mm	: +- 0.10	+	cm3/1000 strokes	: +- 5.0
		+	Check tolerance	
			cm3/1000s.	: +- 8.0
FUEL DELIVERY CHA	ARACTERISTICS	<u> </u>		
THE PERSON OF TH	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+		
		†	LALL TALE	
Aneroid pressure	. 4250	†	LOW IDLE	
hPa	: 1250 : 500	†	Dated speed spe	: 550
Rated speed rpm Del. quantity	: 200	Ī	Rated speed rpm	. 550
cm3/1000 strokes	· 178 በ	I	Rack travel in mm	: 4.50
Tolerance	. ,,,,,,	1	Tolerance mm	: +- 0.20
cm3/1000 strokes	: +- 2.0	1	Del. quantity	
Check tolerance	· • • • • • • • • • • • • • • • • • • •	+	cm3/1000 strokes	: 25.0
cm3/1000s.	: 5.0	+	Tolerance	
Spreed		+	cm3/1000 strokes	: +- 2.0
Tolerance		+	Check tolerance	
cm3/1000 strokes	: 6.0	†	cm3/1000s.	: +- 4.5
Check tolerance	. 00	†	Spreed	
cm3/1000s.	: 9.0	†	Tolerance cm3/1000 strokes	: 3.5
		1	CMD/ FUUU STrokes	. 3.)
				

Check tolerance cm3/1000s.	•	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 403 474 021F

Injection pump

Pump designation : PES4MW100/720RS1181

EP type number : 0 413 404 107

Governor

Governer design. : RSV400...1000MW1A348

: 0 420 085 183 Governer no.

Cust. part No.

Customer-spec. information : LIEBHERR Customer Motor : D924 T-E A2

: 120.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C 2.0

: 1 417 413 049 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : +- 1.0

Prestroke mm 3.05 : + 0.05Tolerance mm

Check

: +- 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

: + - 0.75tolerance °NW

Start of delivery mark

Barrel no. :

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 13.20

: +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes :

176.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. 4.0 : +-

Spreed +	Tolerance
Tolerance	cm3/1000 strokes : 4.0 Check tolerance
cm3/1000 strokes : 4.0	cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	**************************************
+	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 96.0
Rack travel in mm: 4.50	RATED SPEED
Tolerance mm : +- 0.20	rack travel mm : 12.20
Del. quantity cm3/1000 strokes : 25.0	Rated speed rpm : 915 Tolerance 1/min : +- 5
Tolerance + 2.0 +	rack travel mm : 4.00
Check tolerance cm3/1000S. : +- 4.5	Rated speed rpm : 975 Tolerance 1/min : +- 10
Spreed	
Tolerance + cm3/1000 strokes : 3.5 +	rack travel mm : 1.00 Tolerance mm : + 0.70
Check tolerance + cm3/1000s. : 5.0	Rated speed rpm : 1075
1	rack travel mm : 4.00 Rated speed rpm : 980
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 980 Tolerance 1/min : +- 10
WITH GOVERNOR +	
+	
GUIDE SLEEVE POSITION	LOW IDLE
‡	
control lever position degree : -3	LOW IDLE control lever position degree : 78.0
control lever position degree : - 3 Rated speed rpm : 800	control lever
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.65	control lever position degree : 78.0 Setting point w/out bumper spring
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : +- 0.35 governor spring pre-tension click setting x : 3.75	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing:
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20 TORQUE CONTROL
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20 TORQUE CONTROL Rated speed rpm : 900

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 500 : 13.20 : + 0.05 : 600 : 13.20 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 12.20 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1250 : 13.20 : + 0.05
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 550 : 12.45 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 640 : 13.05 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1250 : 500 : 178.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: ← 5.0
Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 9.0
Aneroid pressure hPa	: 1250

Rated speed rpm Del. quantity	: 600
cm3/1000 strokes	: 180.0
Tolerance cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s.	: +- 5.0
Aneroid pressure	
Rated speed rpm	550
Del. quantity cm3/1000 strokes Tolerance	: 156.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000S.	: +- 4.0
STARTING FUEL DEL	IVERY
ESS test: With 2	4 V solenoid a

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm	:		100
rack travel mm	:		20.00
Tolerance mm	:	+-	1.00
Del. quantity			
cm3/1000 strokes	:		135.0
Tolerance			
cm3/1000 strokes	:	+-	5.0
Check tolerance			
cm3/1000S.	:	+-	8.0

LOW IDLE

Rated speed rpm	:	400
Rack travel in mm Tolerance mm Del. quantity	: : +-	4.50 0.20
cm3/1000 strokes	:	25.0
cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s. Spreed	: +-	4.5
Tolerance cm3/1000 strokes	•	3.5
Check tolerance cm3/1000S.	:	5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 476 112

Injection pump

Pump designation : PES6MW100/720RS1225

: -1

EP type number : 0 413 406 220

Governor

Governer design. : RSV400...1000MW1A338

: -1

Governer no. : 0 420 085 184

Cust. part No. : 9880791

Customer-spec. information
Customer : LIEBHERR

Motor : D 926 T-E A2

Power KW : 164.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.51

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 14.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 159.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0	+ Check tolerance + cm3/1000S. : +- 4.0 + Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	- ‡
cm3/1000s. : 7.5	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 98.0 tolerance degree : +- 4.0
Rack travel in mm: 5.80	+
Tolerance mm : +- 0.10 Del. quantity	+ RATED SPEED + rack travel mm : 13.05
cm3/1000 strokes : 17.0	Rated speed rpm : 1040
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1085
Spreed Tolerance	† Tolerance 1/min : +- 10
cm3/1000 strokes : 3.5	rack travel mm : 1.00 Tolerance mm : + 0.70
Check tolerance	
cm3/1000s. : 5.0	+ Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ rack travel mm : 4.00 + Rated speed rpm : 1090 + Tolerance 1/min : + 10
GUIDE SLEEVE POSITION	LOW IDLE
control lever	-
position degree : - 3 Rated speed rpm : 800	<pre>+ control lever + position degree : 70.0</pre>
rateu speeu (piii . 000	tolerance degree : + 4.0
Rack travel in mm : 0.65 Tolerance mm : +- 0.35	Setting point w/out bumper spring
governor spring	Rated speed rpm : 400
pre-tension	rack travel mm : 5.00 Tolerance mm : + 0.10
click setting x : 2.25	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	- Rated speed rpm : 100
	CRT mm min. : > 19.00
Rated speed rpm : 1000 Aneroid pressure	† Testing:
hPa : 1200	+
Del. quantity cm3/1000 strokes : 159.0	+ Rated speed rpm : 400 + rack travel mm : 5.80
Tolerance	+ Tolerance mm : +- 0.10
cm3/1000 strokes : $+-$ 1.0	†

		+ Tolerance
	· · · · · · · · · · · · · · · · · · ·	
TORQUE CONTROL	4000	+ Check tolerance
Rated speed rpm		+ cm3/1000s. : 9.0
rack travel mm		†
Tolerance mm	: ← 0.05	
~	500	+ Aneroid pressure
Rated speed rpm		hPa : 1200
rack travel mm		+ Rated speed rpm : 700
Tolerance mm	: ← 0.10	+ Del. quantity
	700	+ cm3/1000 strokes : 160.5
Rated speed rpm		+ Tolerance
rack travel mm		+ cm3/1000 strokes : +- 2.0
Tolerance mm	: +- 0.10	+ Check tolerance
		+ cm3/1000s. : +- 5.0
ANEROID/ALTITUDE		
COMPENSATOR TEST		+ Aneroid pressure
		+ hPa :
		Rated speed rpm : 550
SETTING		+ Del. quantity
		cm3/1000 strokes : 141.5
Rated speed rpm	: 550	+ Tolerance
Pressure hPa	: -	+ cm3/1000 strokes : +- 1.0
rack travel mm	: 13.45	+ Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 4.0
		+
Rated speed rpm		+
Pressure hPa	: 1200	
rack travel mm	: 14.05	+ STARTING FUEL DELIVERY
Tolerance mm	: +- 0.10	+
		+ Rated speed rpm : 100
MEASUREMENT		+ rack travel mm : 20.25
		+ Tolerance mm : $+$ 0.75
		T Interaction . To 0.13
Rated speed rpm	: 550	+ Del. quantity
Rated speed rpm	: 550	1
Rated speed rpm Pressure hPa	: 550 : 565	+ Del. quantity
		Del. quantity cm3/1000 strokes : 135.0
Pressure hPa	: 565	Del. quantity cm3/1000 strokes : 135.0 Tolerance
Pressure hPa rack travel mm	: 565 : 13.60	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0
Pressure hPa rack travel mm Tolerance mm	: 565 : 13.60	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm	: 565 : 13.60 : + 0.10	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 565 : 13.60 : ← 0.10	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 565 : 13.60 : + 0.10 : 650 : 13.95	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 565 : 13.60 : + 0.10 : 650 : 13.95	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 565 : 13.60 : + 0.10 : 650 : 13.95	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000S. : +- 8.0 LOW IDLE
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000S. : +- 8.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05 **RACTERISTICS : 1200 : 500 : 155.0	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05 **RACTERISTICS	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05 **RACTERISTICS : 1200 : 500 : 155.0	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05 **RACTERISTICS	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 565 : 13.60 : + 0.10 : 650 : 13.95 : + 0.05 **RACTERISTICS	Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.80 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance

Check tolerance cm3/1000s.	:	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 476 151

Injection pump

Pump designation : PES6MW100/720RS1131

EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A405

Governer no. : 0 420 085 294

Cust. part No. : 0270742302

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

tolerance mm

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prescroke mm : 3.75
Tolerance mm : +- 0.05
Check

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: + 0.10

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm : 11.65
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance	+ Check tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL LEVER
	+
Rated speed rpm : 350	<pre>control lever position degree : 107.0 tolerance degree : +- 4.0</pre>
Rack travel in mm : 6.30 Tolerance mm : + 0.25 Del. quantity	RATED SPEED : 10.65
cm3/1000 strokes : 12.0 Tolerance	Rated speed rpm : 1233 Tolerance 1/min : + 3
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.5 Spreed Tolerance	Rated speed rpm : 1315 Tolerance 1/min : + 5
cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 1.00 Tolerance mm : +- 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	†
GUIDE SLEEVE POSITION	control lever position degree : 81.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.65	Rated speed rpm : 100
Tolerance mm : + 0.35	CRT mm min. : > 19.00
governor spring pre-tension	Testing:
click setting x : 5.25	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25
FULL LOAD DELIVERY AT FULL LOAD STOP	+
Rated speed rpm : 1180 - Aneroid pressure	+ rack travel mm : 2.00 + Rated speed rpm : 450 + Tolerance 1/min : +- 30
hPa : 800 - Del. quantity	
cm3/1000 strokes : 89.0	TORQUE CONTROL Rated speed rpm : 1180
cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 11.65 Tolerance mm : +- 0.05
cm3/1000s. : +- 3.0 Spreed	Rated speed rpm : 800
Tolerance - cm3/1000 strokes : 3.5	rack travel mm : 12.00 Tolerance mm : + 0.10

Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.75 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 800 : 12.00 : + 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 500 : - : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 350 : 1.10

Pressure hPa	:	350
rack travel mm	:	1.10
Tolerance mm	: +	- 0.10
Pressure hPa	:	275

rack travel mm : 0.65
Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa	:	800
Rated speed rpm	:	800
Del. quantity		
cm3/1000 strokes	:	88.0
Tolerance		
cm3/1000 strokes	: +-	1.5
Check tolerance	•	, , ,
cm3/1000s.	: +-	4.0
Spreed	•	7.0
Tolerance		
		5.0
cm3/1000 strokes	•	5.0
Check tolerance		7.0
cm3/1000s.	:	7.0

Aneroid pressure		
hPa	:	_
Rated Jeed rpm	:	500
Del. quantity cm3/1000 strokes	:	50.0
Tolerance cm3/1000 strokes	: +-	1.0

Check tolerance		
cm3/1000s.	: +-	3.0

STARTING FUEL DELIVERY

Check hydraulic start locking and unlocking device with 500...1000 hPa.

Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	83.0
Tolerance cm3/1000 strokes	: +	- 5.0
Check tolerance cm3/1000S.	: +	- 8.0

.OW	IDI	

LOM IDLE				
Rated speed rpm	:		350	
Rack travel in mm Tolerance mm Del. quantity	:	+-	6.30 0.25	
cm3/1000 strokes Tolerance	:		12.0	
cm3/1000 strokes Check tolerance	:	+-	2.0	
cm3/1000S. Spreed Tolerance	:	+	4.5	
cm3/1000 strokes Check tolerance	:		3.5	
cm3/1000s.	:		5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.07.97 Test oil : ISO 4113

Combination No. : 0 400 876 275

Injection pump

Pump designation : PES6A95D410RS2471 EP type number : 0 410 896 952

Governor

Governer design. : RSV325...1150A8C674

: -3L

Governer no. : 0 420 232 543

Cust. part No. :

Customer-spec. information

Customer : KHD

Motor : BF6L913C Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95 Tolerance mm : \leftarrow 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 11.85
Tolerance mm: +- 0.05

Del. quantity

cm3/1000 strokes : 109.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.0 Check tolerance	theck tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL LEVER
	+
Rated speed rpm : 325	<pre>control lever position degree : 106.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 6.80	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 19.0	+ rack travel mm : 10.80 + Rated speed rpm : 1195
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : + 3.0	T Total and 17 million 1
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 5.5	+ Rated speed rpm : 1250
Spreed	+ Tolerance 1/min : + 15
Tolerance	+
cm3/1000 strokes : 3.0	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : + 0.55
cm3/1000s. : 5.0	Rated speed rpm : 1400
	Track travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1300
WITH GOVERNOR	+ Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	
	LOW IDLE
control lever	I
position degree : - 3	+ control lever
Rated speed rpm : 800	+ position degree : 71.0
	tolerance degree : + 4.0
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	Catting point was burner and
Tolerance mm : +- 0.20	† Setting point w/out bumper spring
governor spring	Rated speed rpm : 325
pre-tension	+ rack travel mm : 7.30
click setting x : 4.75	† Tolerance mm : + 0.10
	t Botad around the 100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
TOLL FOUR RELIVENT AT TOLL COMP STOP	CRT mm min. : > 19.50
Rated speed rpm : 1150	+
Aneroid pressure	+ Testing:
hPa : 700	+
Del. quantity	Rated speed rpm : 325
cm3/1000 strokes : 109.0	rack travel mm : 6.80
Tolerance	Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0 Check tolerance	rack travel mm : 2.00
cm3/1000S. : +- 3.0	Rated speed rpm : 615
	+ Tolerance 1/min : + 30
Spreed	
Spreed Tolerance	+
	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm	: 1150 : 11.85 : + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.90 : + 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 11.85 : +- 0.05	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.90 : +- 0.10	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 160 : 10.55 : + 0.15	
Pressure hPa rack travel mm Tolerance mm	: 340 : 11.35 : +- 0.05	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm	: 700 : 850	
Del. quantity cm3/1000 strokes	: 105.0	
Tolerance cm3/1000 strokes Check tolerance	: ← 1.5	
cm3/1000S. Spreed	: +- 4.0	
Check tolerance cm3/1000s.	: 7.0	
Aneroid pressure hPa Rated speed rpm	: – : 500	

Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 63.0 : + 1.0 : + 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 15.70 : +- 0.20 : 125.0 : +- 5.0 : +- 8.0
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: + 0.10 : 19.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 3.0 : +- 5.5
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 3.0 : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18,07,97 Edition : ISO 4113 Test oil

Combination No. : 0 400 876 407

Injection pump

Pump designation : PES6A95D410RS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV650...1050A8C2263

: -3L

Governer no. : 0 420 232 586

Cust. part No. : 87 800 684

Customer-spec. information Customer : NH : 7.5 L

Motor : 138.0 Power KW

TEST BENCH REQUIREMENTS

: 3.1 Inlet line

Test oil inlet

temp. °C Tolerance °C : +- 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0 x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 2.60 Tolerance mm : + 0.05Check

tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: + 0.10

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

BASIC SETTING

750 Rated speed rpm

Rack travel in mm : 14.00

: +- 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 141.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. Spreed	: + 3.0	Check tolerance cm3/1000S. Spreed Tolerance	: +- 3.0
	+	cm3/1000 strokes	: 3.5
Tolerance cm3/1000 strokes	: 3.5	Check tolerance cm3/1000s.	: 6.0
Check tolerance cm3/1000s.	: 6.0		
		CONTROL LEVER	
	İ	control lever	
Rated speed rpm	: 650	position degree tolerance degree	
Rack travel in mm		_	
Tolerance mm Del. quantity	+	ASSEMBLY GOVERNOR	R SETTING
cm3/1000 strokes Tolerance	: 22.0	Rated speed rpm	: 1092
cm3/1000 strokes Check tolerance	: + 2.0	rack travel mm	
cm3/1000s.	: + 3.5	Rated speed rpm	
Spreed	†	Tolerance 1/min	
Tolerance cm3/1000 strokes	: 3.5	rack travel mm	: 4.00
Check tolerance		rack travel mm	: 0.85
cm3/1000s.	: 5.5	Tolerance mm	
	+	Rated speed rpm	: 1250
(B) SETTING OF IN	JECTION PUMP	Rated speed rpm	: 1093
	+	Rated speed rpm rack travel mm	: 11.80
	+	Datad award www	. 4427
GUIDE SLEEVE POSI	TION	Rated speed rpm Tolerance 1/min	: 1123 : + 5
doing affect Losi		rack travel mm	
	+		
control lever	_ +	rack travel mm	: 0.85
position degree Rated speed rpm	- 3	Tolerance mm Rated speed rpm	
kated speed rpill	. 300	nated speed i pili	. 1230
Rack travel in mm	: 0.50		
Tolerance mm	: + 0.20	Rated speed rpm rack travel mm	: 1094
coverner coming	1	rack travel mm	: 11.80
governor spring pre-tension	Ī	Rated speed rpm	: 1124
click setting x	: 2.50	Tolerance 1/min	
•	+	rack travel mm	: 4.00
FULL LOAD OF THE	V AT FULL LOAD GTOD		. 005
FULL LUAD DELIVER	Y AT FULL LOAD STOP	rack travel mm Tolerance mm	: 0.85 : + 0.55
Rated speed rpm	: 750	Rated speed rpm	
Aneroid pressure	+	•	
hPa	: 800 +	Description 1	. 1007
Del. quantity cm3/1000 strokes	<u>,,, </u>	Rated speed rpm	1095
	• 1/1 0	ובעוביד ערבין	* 11 XII
Tolerance	: 141.0	rack travel mm	: 11.80

rack travel mm : 4.00	+ Rated speed rpm : 1050
mode Amound man at 0.95	rack travel mm : 12.50
rack travel mm : 0.85 Tolerance mm : +- 0.55	Tolerance mm : +- 0.10
Rated speed rpm : 1250	Rated speed rpm : 1050
Nated Speed I pill . TESO	+ rack travel mm : 12.80
	rack travel mm : 12.80 Tolerance mm : +- 0.10
Rated speed rpm : 1096	+
rack travel mm : 11.80	+ Rated speed rpm : 960
	rack travel mm : 13.60
Rated speed rpm : 1126	+ Tolerance mm : +- 0.15
Tolerance 1/min : + 5	†
rack travel mm : 4.00	ANEDOTO / AL TITUDE
rack travel mm : 0.85	+ ANEROID/ALTITUDE + COMPENSATOR TEST
Tolerance mm : +- 0.55	I COMPENSATOR TEST
Rated speed rpm : 1250	
	1 SETTING
	+
Rated speed rpm : 1097	+ Rated speed rpm : 500
rack travel mm : 11.80	+ Pressure hPa : 800
	+ rack travel mm : 14.00
Rated speed rpm : 1127	Tolerance mm : + 0.10
Tolerance 1/min : +- 5 rack travel mm : 4.00	Dated aread our 1 500
rack travel mm : 4.00	Rated speed rpm : 500 Pressure hPa : -
rack travel mm : 0.85	rack travel mm : 9.00
Tolerance mm : + 0.55	+ Tolerance mm : + 0.10
Rated speed rpm : 1250	1
	MEASUREMENT
	+
LOW IDLE	+ Rated speed rpm : 500
	725
control lever	+ Pressure hPa : 325 + rack travel mm : 11.15
position degree : 73.0	Tolerance mm : + 0.20
tolerance degree : +- 4.0	T Total die indi
1000141100 409100 1101111111111111111111	+ Pressure hPa : 550
Setting point w/out bumper spring	+ rack travel mm : 13.45
	+ Tolerance mm : + 0.05
Rated speed rpm : 650	+
rack travel mm : 5.00 Tolerance mm : + 0.10	+
Tolerance mm : + 0.10	FUEL DEL THERY CHARACTERISTICS
Torting	FUEL DELIVERY CHARACTERISTICS
Testing:	
Rated speed rpm : 650	+ Aneroid pressure
rack travel mm : 5.50	+ hPa : -
Tolerance mm : + 0.10	Rated speed rpm : 500
	+ Del. quantity
rack travel mm : 2.00	+ cm3/1000 strokes : 77.0
Rated speed rpm : 780	+ Tolerance + cm3/1000 strokes : ← 2.0
Tolerance 1/min : +- 30	+ Check tolerance
	+ cm3/1000s. : +- 4.5
TORQUE CONTROL	+
Rated speed rpm : 750	+
rack travel mm : 14.00	+
Tolerance mm : + 0.10	+ STARTING FUEL DELIVERY
	+

Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.00 : +- 0.20
Del. quantity cm3/1000 strokes Tolerance	: 197.0
cm3/1000 strokes Check tolerance	: +- 10.0
cm3/1000s.	: + 13.0

LOW IDLE

Rated speed rpm	:	650	
Rack travel in mm Tolerance mm Del. quantity	: +-	5.50 0.10	
cm3/1000 strokes	:	22.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000S. Spreed	: +-	3.5	
Tolerance cm3/1000 strokes	:	3.5	
Check tolerance cm3/1000S.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 753

Injection pump

Pump designation : PES6P120A720RS3203 EP type number : 0 412 026 728

Governor

Governer design. : RSV400...1100P2A534

: -13

Governer no. : 0 421 833 403

Cust. part No. : RE50748

Customer—spec. information Customer : DEERE

Motor : 6076 AF & HF

Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 2.

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 10.50

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.25

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 156.0	
Tolerance cm3/1000 strokes	: + 1.0	CONTROL LEVER
Check tolerance cm3/1000s.	: + 3.0	<pre>control lever position degree : 99.0 tolerance degree : +- 4.0</pre>
Spreed		RATED SPEED
Tolerance cm3/1000 strokes	: 4.0	rack travel mm : 11.20 Rated speed rpm : 1155 Tolerance 1/min : +- 5
Check tolerance cm3/1000s.	: 6.5	rack travel mm : 4.00 Rated speed rpm : 1230 Tolerance 1/min : +- 5
Rack travel in ma Tolerance man	· · · · · · · · · · · · · · · · · · ·	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15
GUIDE SLEEVE POSI	TION	LOW IDLE
control lever position degree Rated speed rpm		control lever position degree : 76.0 tolerance degree : + 4.0
Rack travel in mm Tolerance mm	: 0.50 : + 0.20	Setting point w/out bumper spring
governor spring pre-tension click setting x	: 4.50	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10
		Rated speed rpm : 100
FULL LOAD DELIVER	Y AT FULL LOAD STOP	CRT mm min. : > 19.00
Rated speed rpm Aneroid pressure	: 1100	Testing:
hPa Del. quantity	: 1200	Rated speed rpm : 400 rack travel mm : 5.40
cm3/1000 strokes	: 156.0	Tolerance mm : +- 0.10
cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 1.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.25
Tolerance cm3/1000 strokes	: 4.0	Tolerance mm : +- 0.05
Check tolerance cm3/1000s.	: 6.5	Rated speed rpm : 650 rack travel mm : 13.50

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.50 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance nm	: 500 : - : 11.00 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hæa rack travel mm Tolerance mm	: 850 : 12.75 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 590 : 11.30 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Pated speed rpm Del. quantity	: 1200 : 650
cm3/1000 strokes Tolerance cm3/1000 strokes	: 189.0 : +- 2.0
Check tolerance cm3/1000s.	: + 4.0
Aneroid pressure hPa Rated speed rpm	: - : 800
Del. quantity cm3/1000 strokes	: 120.0
	: +- 2.0
Tolerance cm3/1000 strokes Check tolerance	; +- 2.0

Rated speed rpm rack travel mm Tolerance mm	:	+-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		100.0
cm3/1000 strokes Check tolerance	:	+-	10.0
cm3/1000s.	:	+-	15.0

LOW IDLE

Rack travel in mm : 5.40 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.06.97 Test oil : ISO 4113

Combination No. : 0 402 076 755

Injection pump

Pump designation : PES6P110A320LS3318

EP type number : 0 412 016 741

Governor

Governer design. : RSV350...750P4A561

Governer no. : 0 421 833 406

Cust. part No. : 1820271092

Customer-spec. information : NAVISTAR Customer : DTA-466 Motor : 185.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : ← 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 12.85 : +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 219.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 3.0
cm3/1000s. : +- 3.0	+ Spreed
- CINO7 (0000)	+ Tolerance
Canad	- cm3/1000 strokes : 4.0
Spreed	
	+ Check tolerance
Tolerance	+ cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	†
	†
Check tolerance	
cm3/1000s. : 6.5	+ CONTROL LEVER
	+
	+ control lever
	position degree : 94.0
Rated speed rpm : 350	tolerance degree : +- 4.0
The state of the s	1
Rack travel in mm : 5.70	+ RATED SPEED
Tolerance mm : +- 0.10	rack travel mm : 11.50
Del. quantity	Rated speed rpm : 755
cm3/1000 strokes : 40.0	Tolerance 1/min : +- 5
Tolerance	T TOTAL MILLS . TE J
	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 795
cm3/1000s. : + 4.5	+ Tolerance 1/min : +- 5
Spreed	†
Tolerance	+ rack travel mm : 0.85
cm3/1000 strokes : 8.0	+ Tolerance mm : + 0.55
Check tolerance	+ Rated speed rpm : 900
cm3/1000s. : 12.0	+
	+ rack travel mm : 4.00
	+ Rated speed rpm : 800
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 5
WITH GOVERNOR	
	1
	1
GUIDE SLEEVE POSITION	LOW IDLE
00200 002010 1 1/03 1.5011	
	1
control lever	control lever
position degree : - 3	position degree : 74.0
	tolerance degree : + 4.0
Rated speed rpm : 800	T total ance degree . +- 4.0
Deal Annual de en . 0.50	Catting paint waste burner and
Rack travel in mm: 0.50	+ Setting point w/out bumper spring
Tolerance mm : + 0.20	†
•	+ Rated speed rpm : 100
governor spring	†
pre-tension	+ CRT mm min. : > 19.00
click setting x : 2.50	+
	+ Testing:
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 350
	+ rack travel mm : 5.70
Rated speed rpm : 700	+ Tolerance mm : + 0.10
Aneroid pressure	1
hPa : -	1
Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 219.0	Rated speed rpm : 700
CMS/ 1000 Strokes : 417.0	T varied sheed this : 100

rack travel mm : 12.85 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : \leftarrow 0.50

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.70 Tolerance mm : - 0.10 Del. quantity cm3/1000 strokes : 40.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.

: +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 756

Injection pump

Pump designation : PES6P100A320LS3317 EP type number : 0 412 006 706

Governor

Governer design. : RSV400...1200P5A587

Governer no. : 0 421 833 446

Cust. part No. : 1820269091

Customer—spec. information
Customer : NAVISTAR
Motor : DTA-466
Power KW : 204.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.00
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50 Check

LIIEUK

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 14.65
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 176.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

: 8.0
: 12.0
: 5.20 : +- 0.10
JECTION PUMP
TION
: - 3 : 800
: 0.50 : + 0.20
: 3.50
Y AT FULL LOAD STOP
: 1200
: 1500
: 176.5
: +- 1.0
: ← 3.0
: 8.0
: 8.0 : 12.0
: 12.0
: 12.0 : 105.0
: 12.0
: 12.0 : 105.0

Rated speed rpm Tolerance 1/min	: 1245 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1315 : + 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1400
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1320 : ← 5
LOW IDLE	
control lever position degree tolerance degree	: 75.0 : + 4.0
Setting point w/ou	ut bumper spring
Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 5.20 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1200 : 14.65 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 1500 : 14.65 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	500 8.40 + 0.20

MEASUREMENT

Rated speed rpm : 1200

Pressure hPa : 650 rack travel mm : 13.20 Tolerance mm : + 0.20

Pressure hPa : 240 rack travel mm : 9.55 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cn3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm: 5.20 Tolerance mm: + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 : ISO 4113 Test oil

Combination No. : 0 402 076 764

Injection pump

Pump designation : PES6P110A720RS3083

: -1

EP type number : 9 410 231 027

Governor

Governer design. : RSV425...1100P2A582

Governer no. : 0 421 833 439

Cust. part No. : RE23748

Customer-spec. information Customer : DEERE Motor : 6466 A Power KW : 161.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

F08

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.50 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 13.00

Tolerance : + 0.50 Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.05

Tolerance mm : +- 0.05

Del. quantity

cm3/100C strokes : 131.5

Tolerance cm3/1000 strokes	: +- 1.0	+
Check tolerance cm3/1000s.	: + 3.0	+
Spreed		‡
Tolerance cm3/1000 strokes	: 4.0	†
Check tolerance cm3/1000s.	: 6.5	
Pack travel in mm Tolerance mm	: +- 0.10	+ + + + + + + + + + + + + + + + + + + +
(B) SETTING OF INWITH GOVERNOR	JECTION PUMP	+++++++++++++++++++++++++++++++++++++++
control lever position degree Rated speed rpm		† † † † †
Rack travel in mm Tolerance mm	: 0.50 : + 0.20	† + + +
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+
Rated speed rpm Aneroid pressure hPa Del. quantity	: 1100 : 1200	† † † †
cm3/1000 strokes Tolerance cm3/1000 strokes	: 131.5 : +- 1.0	†
Check tolerance cm3/1000s. Spreed	: +- 3.0	+
Tolerance cm3/1000 strokes	: 4.0	+
Check tolerance	: 6.5	Ī
cm3/1000s.		1
CONTROL LEVER		+++++++++++++++++++++++++++++++++++++++

tolerance degree	: +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.00 : 1160 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1240 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1350
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1245 : + 15
LOW IDLE	
control lever position degree tolerance degree	: 75.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 425 : 6.50 : +- 0.10
Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 425 : 6.00 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.05 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.20 : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.20 Tolerance mm : +- 0.10

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 11.20 Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 200 rack travel mm : 11.60 Tolerance mm : +- 0.20

Pressure hPa : 375
rack travel mm : 12.55
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1200 Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 154.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

: + 4.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 107.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 5.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : +- 15.0

LOW IDLE

Rack travel in mm : 6.00 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.07.97 : ISO 4113

Combination No. : 0 402 076 770

Injection pump

Pump designation : PES6P110A320LS3318

EP type number : 0 412 016 749

Governor

Governer design. : RSV350...750P4A561

Governer no.

: 0 421 833 451

Cust. part No. : 1823837092

Customer-spec, information Customer

: NAVISTAR : DT-531

Motor

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar :

2.8

Tolerance bar

: **←** 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter :

3.0

x Length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm :

650

Rack travel in mm : 12.55

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 225.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed -	Tolerance cm3/1000 strokes : 4.0
Tolerance - 4.0	- Check tolerance - cm3/1000s. : 6.5
Ciii37 1000 Strokes . 4.0	
Check tolerance cm3/1000s. : 6.5	
	CONTROL LEVER
]	r - control lever
Rated speed rpm : 340	position degree : 97.0
	tolerance degree : +- 4.0
Rack travel in mm: 5.20	DATES ODGES
Tolerance mm : +- 0.10 Del. quantity	RATED SPEED rack travel mm : 10.20
cm3/1000 strokes : 35.0	Rated speed rpm : 750
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	/ 00
Check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00 Rated speed rpm : 800
Spreed	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : 8.0	rack travel mm : 0.85
Check tolerance - cm3/1000s. : 12.0 -	Folerance mm : + 0.55 Rated speed rpm : 900
(115) 10003.	Rated speed rpill : 900
-	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 805
WITH GOVERNOR -	Tolerance 1/min : +- 5
· · · · · · · · · · · · · · · · · · ·	
-	₽
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION	LOW IDLE
-	LOW IDLE
control lever position degree : - 3	control lever
control lever	control lever position degree : 76.0
control lever position degree : - 3 Rated speed rpm : 800	control lever
control lever position degree : - 3	control lever position degree : 76.0
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring	control lever position degree : 76.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure hPa : -	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : +- 0.10 TORQUE CONTROL
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 650
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance cm3/1000 strokes : +- 1.0	control lever position degree : 76.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 650
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 650
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance cm3/1000 strokes : +- 1.0	control lever position degree : 76.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 650

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 : : + - 0.50Tolerance mm Del. quantity cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 340

Rack travel in mm : 5.20 Tolerance mm : **←** 0.10 Del. quantity

cm3/1000 strokes : 35.0

Tolerance

cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. 4.5

Spreed Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.97 : ISO 4113

Combination No. : 0 402 196 706

Injection pump

Pump designation : PES6P120A720RS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 62643

Customer-spec. information Customer : DEERE : 6081AF001 Motor

Power KW

: 187.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

Tolerance mm : + 050

Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at

n=600 min-1, Uact = 2.5 V

	I Tank with annual and
TESTING & SETTING RACK TRAVEL SENSOR POSITION	Test with control rod in stop position
	+ Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	+ tolerance V : +/- 1.20
Uact V : 3.100	Engine speed min-1: 600
Uact V : 3.100 CRT mm : 13.00	Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	Amplitude V : max.1.4
tolerance mm : +/- 0.10	Ampertuae . max. 1.4
coccidification in the control of th	+
Check value	
(P, R and H pump)	+ (C) INJECTION PUMP WITH POSITIONER
	-i-
Hact V : 1 700	T LEST LOTINI AT
Uact V : 1.700 CRT mm : 6.15	Rated speed rpm : 1100
Tolerance mm : +/- 0.25	+ Uact V : 2.880
Check	+ Del. quantity
tolerance mm : +/- 0.30	- cm3/1000 strokes : 140.0
	+ Tolerance
	cm3/1000 ctrokes . + 10
Setting point	- Check tolerance
(dmuq M)	+ cm3/1000s. : +- 4.0
	Spreed
Uact V : 3.100 CRT mm : 12.50	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Uact V : 3.100 CRT mm : 12.50	+ cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05	+ Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+ FUEL DELIVERY CHARACTERISTICS
Check value	
(A pump)	Rated speed rom : 700
and the surface	+ Uact V : 2.880
Uact V : 1.700	- Del. quantity
CRT mm : 5.50	+ cm3/1000 strokes : 141.5
Tolerance mm : +/- 0.25	+ Tolerance
Check	+ cm3/1000 strokes : + 3.0
tolerance mm : +/- 0.30	+ Check tolerance
	+ cm3/1000s. + 6.0
Stop position	+ Spreed
	+ Tolerance
Uact V : Value with	+ cm3/1000 strokes : 8.0
deenergised adjusting magnet	Check tolerance
and control rod in	+ cm3/1000s. : 12.0
stop position. CRT mm : 0.75	
	Rated speed rpm : 425
Tolerance mm : +/- 0.25 Check	+ Rated speed rpm : 425 + Uact V : 1.610
	Del. quantity
tolerance mm : +/- 0.35	+ cm3/1000 strokes : 22.0
	Tolerance
ENGINE-SPEED SENSOR	+ cm3/1000 strokes : +- 3.0
(All P and R pumps not	Check tolerance
H and M pumps)	+ cm3/1000s. : +- 6.0
· · · · · · · · · · · · · · · · · · ·	Spreed
	1

Tolerance

cm3/1000 strokes : 6.0 Check tolerance

cm3/1000s. : 10.0

TEST POINT L1

Rated speed rpm : 425Uact V : 1.610Tolerance Volt : $\leftarrow 0.060$

Check tolerance

Volt : + 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.600 Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.97 : ISO 4113

Combination No. : 0 402 196 707

Injection pump

Pump designation : PES6P12OA72ORS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 62645

Customer-spec. information Customer : DEERE Motor : 6081HF

: 6081HF001 : 203.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C

: + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar :

2.0

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Firing order : 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 9.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50

Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

			Fundana amenda sin	1. (0
Engine speed min-	1: 0	1	Engine speed min-	
criginia apaca mini	5	1	Amplitude V Tolerance V	: +/- 0.6
Setting point		1	Check	
(P, R and H pump)		+	tolerance V	: +/- 1.20
	m 400	+		
Uact V CRT mm	: 3.100 : 13.00	†	Engine speed min-	1: 600
Tolerance mm	: 13.00	†	Difference	
Check	: +/- 0.03	I	Amplitude to Amplitude V	• may 1 /
tolerance mm	: +/- 0.10	I	Amperedae v	· max.1.4
		+		
Check value		+		
(P, R and H pump)		+	(C) INJECTION PUM	P WITH POSITI
		†	TEST POINT V1	
Uact V	• 1 700	I	LEST LOTIAL AL	
CRT mm	: 1.700 : 6.15	I	Pated speed row	• 1100
Tolerance mm	: +/- 0.25	1	Pated speed rpm Uact V	: 2.880
Check		+	Del. quantity	
tolerance mm	: +/- 0.30	+	cm3/1000 strokes	: 140.0
		+	Tolerance	
		+	cm3/1000 strokes	: +- 1.0
Setting point		+	Check tolerance	. 3.0
(M pump)		†	cm3/1000s.	: +- 3.0
Uact V	. 3 100	Ī	Spreed Tolerance	
CRT mm	: 3.100 : 12.50	Ĭ	cm3/1000 strokes	: 5.0
CRT mm Tolerance mm	: 4/- 0.05	1	Check tolerance	
Check		+	cm3/1000s.	: 9.0
tolerance mm	: +/- 0.10	+	FUEL DELIVERY CHA	RACTERISTICS
		+		
Check value		†	Datad anad non	. 700
(M pump)		Ī	Rated speed rpm Uact V	: 700
Uact V	: 1.700	I	Del. quantity	. 2.000
CRT mm	: 5.50	1	cm3/1000 strokes	: 141.5
Tolerance mm		+	Tolerance	
Check		+	cm3/1000 strokes	: + 3.0
tolerance mm	: +/- 0.30	+	Check tolerance	
		†	cm3/1000s.	: +- 6.0
Stop position		†	Spreed Tolerance	
Uact V	: Value with	I	cm3/1000 strokes	: 8.0
	rgised adjusting magnet	I	Check tolerance	. 0.0
400110	and control rod in	1	cm3/1000s.	: 12.0
	stop position.	1		
CRT mm	: 0.75	+		
Tolerance mm	: +/- 0.25	+	Rated speed rpm	: 425
Check	0.75	+	Uact V	: 1.610
tolerance mm	: +/- 0.35	†	Del. quantity	: 22.0
		I	cm3/1000 strokes Tolerance	. 22.0
ENGINE-SPEED SENSO	OR	I	cm3/1000 strokes	: 3.0
(All P and R pumps		1	Check tolerance	
H and M pumps)	- ·- ·	+	cm3/1000s.	: +- 6.0
, .		+	Spreed	
Test with control	rod	+	Tolerance	
in stop position		+	cm3/1000 strokes	: 6.0
		+		

POSITIONER

Check tolerance

cm3/1000s. : 10.0

TEST POINT L1

Rated speed rpm : 425Uact V : 1.610Tolerance Volt : +0.060

Check tolerance

Volt : ← 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.600

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 13.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 708

Injection pump

Pump designation : PES6P120A720RS3362

EP type number : 0 412 026 787

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 64860

Customer-spec. information
Customer : DEERE
Motor : 6076ADW31
Power KW : 140.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.75 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : + 0.50
Difference CS : 3.25

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

	Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 Tolerance V : +/- 0.6
0-412	
Setting point	- Check
(P, R and H pump)	tolerance V : +/- 1.20
Uact V : 3.100 CRT mm : 13.00	Engine speed min-1: 600
CRT mm : 13.00	Difference
Tolerance mm : +/- 0.05	Amplitude to
Check	Amplitude V : max.1.4
tolerance mm : +/- 0.10	+
Check value	
(P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
	7
	TEST POINT V1
Uact V : 1.700	†
CRT mm : 6.15	Rated speed rpm : 1100
Tolerance mm : +/- 0.25	Uact V : 2.800 Del. quantity
Check	Pel. quantity
tolerance mm : +/- 0.30	cm3/1000 strokes : 139.0
•	+ Tolerance
•	+ cm3/1000 strokes : +- 1.0
Setting point	f Check tolerance
(M pump)	+ cm3/1000s. : +- 4.0
	+ Spreed
Uact V : 3.100 : 12.50	+ Tolerance
CRT mm : 12.50	cm3/1000 strokes : 5.0
Talerance mm : +/- 0.05	- Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	FUEL DELIVERY CHARACTERISTICS
	+ FUEL DELIVERY CHARACTERISTICS
Check value	
	Rated speed rpm : 700
Check value (M pump)	Rated speed rpm : 700 Uact V : 2.800
Check value (M pump)	Rated speed rpm : 700 Uact V : 2.800 Del. quantity
Check value (M pump) Uact V : 1.700 CRT mm : 5.50	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position.	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position.	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Rated speed rpm : 425
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Rated speed rpm : 425
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Rated speed rpm : 425 Uact V : 1.580
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes : 43.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes : 43.0 Check tolerance
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed
Check value (M pump) Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not	Rated speed rpm : 700 Uact V : 2.800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 425 Uact V : 1.580 Del. quantity cm3/1000 strokes : 22.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0

Check tolerance

cm3/1000s. : 10.0

TEST POINT L1

Rated speed rpm : 425 Uact V : 1.580

Tolerance Volt : + 0.060

Check tolerance

Volt : + 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100

Uact V : 4.600

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000S. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 776 815

Injection pump

Pump designation : PES6P120A720RS7255 EP type number : 0 412 726 881

Governor

Governer design. : RSV400...900P7A569

Governer no. : 0 421 833 418

Cust. part No. : RE42226

Customer-spec. information Customer : DEERE

: 6101 AF010 Motor : 6101 Al Power KW : 285.0 Motor

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 145 Tolerance l/h : + 5.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-50-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

*NW after s.o.d. : 8.50

Tolerance : + 0.50 Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 14.75

Tolerance mm : +- 0.05

Rack travel in mm: 5.00 Tolerance mm : + 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : -3
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00CONTROL LEVER control lever position degree : 106.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 14.10
Rated speed rpm : 900
Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 940 4.00 Tolerance 1/min : + 5 rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 980 Tolerance 1/min : + 15 LOW IDLE control lever

Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.50 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 850 rack travel mm : 14.75 Tolerance mm : + 0.05 Start interlock Rated speed rpm : > 100 Check speed 1/min : > 80 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rack travel in mm : 5.00 Tolerance mm : \leftarrow 0.10

position degree : 80.0 tolerance degree : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 776 816

Injection pump

Pump designation : PES6P12OA72ORS7255

EP type number : 0 412 726 881

Governor

Governer design. : RSV400...1050POA547

: -4

Governer no. : 0 421 833 419

Cust. part No. : RE46178

Customer-spec. information Customer : DEERE

Motor

: 6101 HF010

Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 145 Tolerance L/h : + 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) TRAFCTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 8.75

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.65 Tolerance mm : \leftarrow 0.05

F26

+	Check tolerance
Del. quantity cm3/1000 strokes : 259.5	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : + 1.0	CONTROL LEVER
Check tolerance cm3/1000s. : + 4.0	control lever position degree : 97.0 tolerance degree : +- 4.0
Spreed	RATED SPEED
Tolerance cm3/1000 strokes : 5.0	rack travel mm : 12.60 Rated speed rpm : 1100 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 9.0	rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 5
Rack travel in mm: 5.30 Tolerance mm: : + 0.10	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 72.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm : + 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 400
pre-tension +	rack travel mm : 5.80 Tolerance mm : +- 0.10
click setting x : 3.50	
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1050	CRT mm min. : > 19.00
Aneroid pressure	Testing:
hPa : 1700 +	Rated speed rpm : 400
cm3/1000 strokes : 259.5	rack travel mm : 5.30 Tolerance mm : + 0.10
Tolerance + cm3/1000 strokes : + 1.0 +	roterance inii . +- U. iu
Check tolerance + 4.0 +	TORQUE CONTROL
Spreed +	Rated speed rpm : 1050 rack travel mm : 13.65
cm3/1000 strokes : 5.0	Tolerance mm : + 0.05

Rated speed rpm 850 rack travel mm : 14.00 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa 1700 : rack travel mm 14.00 Tolerance mm : + 0.10

500 Rated speed rpm : Pressure hPa : : 11.80 rack travel mm Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm 500

Pressure hPa 1345 rack travel mm 13.05 Tolerance mm : +- 0.05

: 1090 Pressure hPa rack travel mm 12.00 Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 1700 Rated speed rpm 850 Del. quantity

cm3/1000 strokes : 276.0 Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 196.0

Tolerance

2.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm : 5.30 Tolerance mm : \leftarrow 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 813

Injection pump

Pump designation : PES6P12OA72ORS7356 EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 61658

Customer-spec. information

Customer : DEERE

Motor : 6081 HF001

Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. *C : 40

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

G01

x inside diameter: 3.0

x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.75 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Setting point (amua M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check tolerance mm : +/- 0.10 Check value (M pump) 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm Tolerance mm : +/- 0.25

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V 600 Engine speed min-1: Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1050 Uact V 3.030 Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes Check tolerance cm3/1000s.4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 Uact V 3.120 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

TEST POINT L1

Uact V

Rated speed rpm

450

1.740

Check

tolerance mm

Tolerance Volt : +- 0.060Check tolerance Volt : + 0.060Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 819

Injection pump

Pump designation : PES6P120A720RS7407

EP type number : 0 412 726 955

Governor

Governer design. : RE30

Governer no. : 0 421 890 037

Cust. part No. : RE 65679

Customer—spec. information Customer : DEERE

Motor : 6101HRW10 Power KW : 266.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

CHECK

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25 Tolerance : + 0.50

Check tolerance *NW

Barrel no.

: + 0.75

: 1

Beginning of delivery differende

and maximum rack

travel : 15.00

Difference * CS : 3.75 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) Uact V : 3.100 CRT mm 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Setting point (amua M) 3.100 Uact V : CRT mm 12.50 : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. CRT mm 0.75

Check : +/- 0.35 tolerance mm ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position 60 Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1,20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 1050 Rated speed rom Uact V 3.030 Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance 9.0 cm3/1000s.FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 3.120 Uact V Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 TEST POINT L1

: +/- 0.25

Tolerance mm

Rated speed rpm 450 1,740 Uact V : +- 0.060 Tolerance Volt Check tolerance : +- 0.060Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04,07,96 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 650

Injection pump

Pump designation : PE6P130A720RS7354 EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -2K

: D 421 815 434 Governer no.

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8210.42.4000 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar 208.5 Tolerance bar : **←** 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

: 5.05 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm: 13.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

tolerance °NW : +- 0.40

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 13.20 : + 0.05Tolerance mm

Del. quantity cm3/1000 strokes : 274.0

Tolerance +	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4.0	
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1185
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 12.00 Tolerance mm : +- 1.30
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.40 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 35.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000 strokes: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 950 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 274.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1007 + guide sleeve	position degree : 114.0 tolerance degree : +- 4.0
travel mm : 8.73 Tolerance mm : + 0.15	RATED SPEED rack travel mm : 12.10 Rated speed rpm : 995
Rated speed rpm : 300 + guide sleeve + travel mm : 1.64 +	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Tolerance mm : + 0.20	rack travel mm : 4.00
Rated speed rpm : 756 + guide sleeve + travel mm : 6.16 +	Rated speed rpm : 1110 Tolerance 1/min : +- 15 Check
Tolerance mm : + 0.25	speed 1/min : +- 20
Rated speed rpm : 500 guide sleeve travel mm : 3.78 Tolerance mm : +- 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1300
Rated speed rpm : 1340 +	

LOW IDLE	
control lever position degree tolerance degree	: 69.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.40 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.20 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.75 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 550 : 12.05 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 11.80 : + 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Folerance mm	: 950 : 900 : 13.20 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Folerance mm	950 : - : 8.30 : + 0.40
MEASUREMENT	
Rated speed rpm	: 950
Pressure hPa rack travel mm Tolerance mm	: 320 : 9.85 : + 0.20

Pressure hPa rack travel mm Tolerance mm	: 610 : 12.10 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 180 : < 220
Check speed 1/min Check	: > 160
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 900 : 550
Del. quantity cm3/1000 strokes	: 286.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes Tolerance	: 155.0
cm3/1000 strokes Check tolerance	
cm3/1000s.	: +- 19.0
LOW IDLE	
Rated speed rpm	: 275
Rack travel in mm	: 5.40

Tolerance mm Del. quantity	: +-	0.10
cm3/1000 strokes	:	35.0
Tolerance cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	8.0
	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.07.97 Test oil : ISO 4113

Combination No. : 0 402 746 608

Injection pump

Pump designation : PES6P120A320RS7359 EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1275 Governer no. : 0 421 801 805

Cust. part No. : CCEP 5157A 66-222

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDRO62045 F/C41

Power KW : 152.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 220 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.25

Tolerance mm : +- 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : -0.95

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 11.70 Tolerance mm : +- 0.05	Rated speed rpm : 1050 guide sleeve travel mm : 6.70 Tolerance mm : +- 0.10
BASIC SETTING	+ Octor arises time
Rated speed rpm : 1050	Rated speed rpm : 648 guide sleeve travel mm : 6.18
Del. quantity cm3/1000 strokes : 176.0	Tolerance mm : + 0.10 Rated speed rpm : 375
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 5.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 450
Spreed	travel mm : 6.00 Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1300 guide sleeve travel mm : 11.50
Check tolerance cm3/1000s. : 9.0	Tolerance mm : + 0.50
Rated speed rpm : 275	Rated speed rpm : 873 guide sleeve travel mm : 6.52 Tolerance mm : + 0.10
Rack travel in mm : -6.10 Tolerance mm : + 0.10	
Del. quantity cm3/1000 strokes : 28.0 Tolerance	GUIDE SLEEVE POSITION
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0	control lever position degree : 109 Rated speed rpm : 500
Spreed Tolerance	Rated speed rpm : 500 Rack travel in mm : 20.00
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Tolerance mm : + 0.80
cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1050 Aneroid pressure hPa : 1000
GUIDE SLEEVE TRAVEL	Del. quantity cm3/1000 strokes : 176.0
Rated speed rpm : 1122 guide sleeve	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
travel mm : 7.06 Tolerance mm : +- 0.15	cm3/1000s. : +- 4.0 + Spreed + Tolerance
Rated speed rpm : 275 guide sleeve	cm3/1000 strokes : 5.0 Check tolerance
travel mm : 2.44 Tolerance mm : + 0.20	- cm3/1000s. : 9.0

CONTROL LEVER

control lever

position degree : 276.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm -1.00Rated speed rpm : 1115 Tolerance 1/min

-7.70rack travel mm Rated speed rpm 1205 Tolerance 1/min : + 15

: -11.20 rack travel mm : + 0.50Tolerance mm Rated speed rpm : 1350

LOW IDLE

control lever

256.0 position degree : tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : < -4.20

Testing:

275 Rated speed rpm rack travel mm -6.10: : + 0.10Tolerance mm

rack travel mm -9.70Rated speed rpm 365 Tolerance 1/min : +-

TORQUE CONTROL

Rated speed rpm : 1050

Rated speed rpm 600 : rack travel mm 1.00 : +- 0.10 Tolerance mm

800 Rated speed rpm : 0.80 rack travel mm : +- 0.20 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa 1000 1.00 rack travel mm : + 0.10Tolerance mm

500 Rated speed rpm Pressure hPa _ -0.75rack travel mm Tolerance mm : + - 0.20

MEASUREMENT

Rated speed rpm 500

280 Pressure hPa rack travel mm 0.65 Tolerance mm : + - 0.15

Pressure hPa 160 -0.15rack travel mm : +- 0.05 Tolerance mm

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 195

Check

speed 1/min : > 80 Check

speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 Rated speed rpm 600

Del. quantity

cm3/1000 strokes : 193.0 Tolerance

cm3/1000 strokes : +-

3.0 Check tolerance cm3/1000s. : +- 6.0

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity
cm3/1000 strokes : 149.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 275 Rack travel in mm: -6.10 Tolerance mm : + - 0.10Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance 5.0 cm3/1000s. Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.08.97 Edition Test oil : ISO 4113

Combination No. : F 000 409 888

Injection pump

Pump designation : PES6A80D320RS1271 EP type number : 9 400 083 058

Governor

Governer design. : RSV350...1400A2C2179

: 9 420 083 281 Governer no.

Cust. part No. :

Customer-spec. information : MWM Customer : D229-6 Motor : 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : +- 1.5 Tolerance bar

: 1 680 750 003 Test lines

Outside diameter : 6.0

x inside diameter : 2.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

2,25 Prestroke mm Tolerance mm : +- 0.05

Check

tolerance mm : + - 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : + 0.75

Beginning of delivery differende

and maximum rack

travel 10.50 : +- 1.50 Tolerance mm Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.25 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 61.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 0.5	+ cm3/1000 strokes : +- 0.5
	- Check tolerance
Check tolerance	+ cm3/1000s. : +- 2.0
cm3/1000s. : +- 2.0	
cm5/10005, ; +- 2.0	+ Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 2.5
	+ Check tolerance
Tolerance	+ cm3/1000s. : 4.0
cm3/1000 strokes : 2.5	+
	+
Check tolerance	
cm3/1000s. : 4.0	+ CONTROL LEVER
	+ control lever
	position degree : 90.0
Rated speed rpm : 400	tolerance degree : +- 4.0
Rated speed rpm : 400	toterance degree : +- 4.0
Book Annual Survey 3.00	T DATES COSES
Rack travel in mm: 7.20	+ RATED SPEED
Tolerance mm : + 0.10	+ rack travel mm : 9.20
Del. quantity	+ Rated speed rpm : 1435
cm3/1000 strokes : 12.5	+ Tolerance 1/min : +- 5
Tolerance	+
cm3/1000 strokes : + 1.5	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1510
cm3/1000s. : +- 3.5	+ Tolerance 1/min : +- 15
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 4.0	Tolerance mm : + 0.55
Check tolerance	+ Rated speed rpm : 1650
cm3/1000s. : 6.0	Ť
	†
4-1	†
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	+ LOW IDLE
	+
	+
	+ control lever
GUIDE SLEEVE POSITION	+ position degree : 63.0
	+ tolerance degree : + 4.0
	1
control lever	+ Setting point w/out bumper spring
position degree : - 3	Totaling Parille Manage Schilled Shi iling
Rated speed rpm : 800	Rated speed rpm : 400
varen sheen thii . Our	+ rack travel mm : 6.70
Deal Annual de mar a 0.45	Tolonnoo m
Rack travel in mm: 0.65	+ Tolerance mm : + 0.10
Tolerance mm : +- 0.35	T 200
	+ Rated speed rpm : 100
governor spring	†
pre-tension	+ CRT mm min. : > 19.00
click setting x : 4.00	+
-	+ Testing:
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 400
	+ rack travel mm : 7.20
Rated speed rpm : 1400	+ Tolerance mm : + 0.10
Aneroid pressure	10001001001001
	rack travel mm : 2.00
hPa : -	
Del. quantity	+ Rated speed rpm : 640
cm3/1000 strokes : 61.0	+ Tolerance 1/min : + 30

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1400 : 10.25 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.75 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 10.55 : + 0.10
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
Rated speed rpm	500
Del. quantity	. 52.0
cm3/1000 strokes Tolerance	: 52.0
cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s.	: +- 3.0
CHS/ 10005.	. + 3.0
Aneroid pressure	
hPa Rated speed rpm	: – : 800
Del. quantity	
cm3/1000 strokes	: 55.0
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance	
	: +- 3.0
cm3/1000s.	
STARTING FUEL DEL	IVERY
	: 100
STARTING FUEL DEL	

Del. quantity		
cm3/1000 strokes	:	12.5
Tolerance		
cm3/1000 strokes	: +-	1.5
Check tolerance		
cm3/1000s.	: +	3.5
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	:	6.0

End of test specification sheet

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 7.20 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 846 598

Injection pump

Fump designation : PES6A90D410RS2813 EP type number : 0 410 896 089

Governor

Governer design. : RQV300...1050AB1265L

Governer no. : 0 420 212 234

Cust. part No. :

Customer-spec. information Customer : IVECO-FIAT

: 8065.25.094 : 145.0 Motor

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40

Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzie holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.30
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.35 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.25

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 80.0

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

: +- 2.5 cm3/1000s.

Spreed	
Tolerance cm3/1000 strokes	: 3.0
Check tolerance cm3/1000s.	: 7.0
Rated speed rpm	: 400
Rack travel in mm Tolerance mm	8.30 + 0.10
Del. quantity cm3/1000 strokes	: 12.0
Tolerance cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 4.5
Check tolerance cm3/1000s.	: 7.0
(B) SETTING OF IN	LECTION DUMP
WITH GOVERNOR	JECTION PUMP
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm	EL
WITH GOVERNOR GUIDE SLEEVE TRAV	EL
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	EL : 740 : 4.95
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 740 : 4.95 : + 0.25
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	EL : 740 : 4.95 : + 0.25 : 380 : 1.85
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 740 : 4.95 : + 0.25 : 380 : 1.85 : + 0.25
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 740 : 4.95 : + 0.25 : 380 : 1.85 : + 0.25 : 400 : 2.25
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 740 : 4.95 : + 0.25 : 380 : 1.85 : + 0.25 : 400 : 2.25 : + 0.25
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	EL : 740 : 4.95 : + 0.25 : 380 : 1.85 : + 0.25 : 400 : 2.25 : + 0.25 : 460 : 2.85

control lever position degree Rated speed rpm	: - 1 : 1200
Rack travel in mm Tolerance mm	: 9.50 : +- 2.70
FULL LOAD DELIVERY	AT FULL LOAD STOP
Rated speed rpm	: 1050
Aneroid pressure hPa	: -
Del. quantity cm3/1000 strokes	: 80.0
Tolerance	
cm3/1000 strokes	: +- 0.5
Check tolerance cm3/1000s.	: +- 2.5
Spreed	
Tolerance cm3/1000 strokes	: 3.0
Check tolerance cm3/1000s.	: 7.0
CIII37 10003.	: 7.0
position degree tolerance degree RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm Tolerance mm Rated speed rpm Rated speed rpm	: 116.0 : + 4.0 : 10.20 : 10.95 : + 5 : 4.00 : 1205 : + 15 : 0.50 : + 0.50 : 1320
LOW IDLE control lever position degree	: 79.0

Rated speed rpm	: 300
CRT mm min.	; > 10.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 8.30 : +- 0.10
Rated speed rpm	: 525
TORQUE CONTROL	
Dimension a mm Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 13.55 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.80 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 850 : 12.45 : ← 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.55 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.25 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 580 : 13.35 : +- 0.05
Pressure hPa	: 540 · 12 90

12.90

: +- 0.10

		
: > : <	100 320	
: >	80	
; <	340	
ARACTER	ISTICS	
	: >	: > 80

		·
Aneroid pressure		
hPa	:	-
Rated speed rpm	:	750
Del. quantity		
cm3/1000 strokes	:	82.0
Tolerance		
cm3/1000 strokes	: +-	- 1.5
Chack talaranca		

cm5/1000 strokes	; +-	1.5
Check tolerance cm3/1000S.	: +-	3.5

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	70.0
Tolerance		
cm3/1000 strokes	: +-	- 0.5
Check rolerance		
cm3/1000s.	: +-	- 2.5

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm	:	100
rack travel mm	:	20.25
Tolerance mm	: +-	- 0.75
Del. quantity		
cm3/1000 strokes	:	115.0
Tolerance		
cm3/1000 strokes	: +-	- 7.5
Check tolerance		
cm3/1000s.	: +-	- 10.0

rack travel mm

Tolerance mm

LOW IDLE

Rated speed rpm	:	400	
Rack travel in mm Tolerance mm	•	8.30 0.10	
Del. quantity	•	0.10	
cm3/1000 strokes	:	12.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance	•		
cm3/1000s. Spreed	: +-	4.0	
Tolerance			
cm3/1000 strokes	:	4.5	
Check tolerance cm3/1000s.	:	7.0	
	-		

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 400 846 600

Injection pump

Pump designation : PES6A90D410RS2818 EP type number : 0 410 896 091

Governor

Governer design. : RQV300...1500AB1266L

Governer no. : 0 420 212 236

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT Motor : 8060.25.670

Power KW : 175.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : + 0.75

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm : 12.35 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 79.5

Talana.

Tolerance

cm3/1000 strokes : +-- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Table 1	
Tolerance	T annual laws
cm3/1000 strokes : 3.0	t control lever
Check tolerance	<pre>position degree : - 1 Rated speed rpm : 1740</pre>
cm3/1000s. : 4.5	T Kateu speed (piii . 1140
CIID7 (0003. : 4.3	Rack travel in mm: 11.30
	Tolerance mm : +- 1.30
	T Toterance likit : +- 1.50
Rated speed rpm : 300	
hated speed (piii . Sou	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 9.50	T TOLL LOAD DELIVERY AT TOLL LOAD STOP
Tolerance mm : + 0.10	Rated speed rpm : 1500
Del. quantity	Aneroid pressure
cm3/1000 strokes : 15.0	+ hPa : -
Tolerance	Del. quantity
cm3/1000 strokes : + 3.0	+ cm3/1000 strokes : 79.5
Check tolerance	+ Tolerance
cm3/1000s. : +- 5.0	- cm3/1000 strokes : + 0.5
Spreed	- Check tolerance
Tolerance	+ cm3/1000s. : +- 2.5
cm3/1000 strokes : 2.5	Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 4.5	$\frac{1}{2}$ cm3/1000 strokes : 3.0
	+ Check tolerance
	+ cm3/1000s. : 4.5
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	+
	+ control lever
Rated speed rpm : 640	+ position degree : 121.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 3.45	T DATES SOURCE
Tolerance mm : + 0.25	+ RATED SPEED
Data di angold nome i 250	+ rack travel mm : 11.30 + Rated speed rpm : 1595
Rated speed rpm : 250	+ Rated speed rpm : 1595 + Tolerance 1/min : +- 5
guide sleeve travel mm : 1.15	1 Recenance 1/min : +- 3
travel mm : 1.15 Tolerance mm : +- 0.25	rack travel mm : 4.00
locerance min : - 0.25	Rated speed rpm : 1755
Rated speed rpm : 435	Tolerance 1/min : +- 15
anda atam	Total arise 17 mills
travel mm : 2.25 Tolerance mm : + 0.25	+ rack travel mm : 0.50
Tolerance mm : + 0.25	+ Tolerance mm : + 0.50
TOCCI di loc man	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1870
Rated speed rpm : 485	
guide sleeve	1
travel mm : 2.55	1
travel mm : 2.55 Tolerance mm : + 0.25	
The second secon	+ LOW IDLE
Rated speed rpm : 1610	+
guide sleeve	+
guide sleeve travel mm : 8.35	+ control lever
Tolerance mm : +- 0.25	+ position degree : 76.0
	+ tolerance degree : +- 4.0
	+
GUIDE SLEEVE POSITION	+ Setting point w/out bumper spring
	1

Rated speed rpm

200

CRT mm min. : > 10.60

Testing:

Rated speed rpm : 300 rack travel mm : 9.50 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1500 rack travel mm : 12.35 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 12.40 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa

Rated speed rpm : 1000

Del. quantity

cm3/1000 strokes : 75.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity

cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : \leftarrow 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 9.50 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : + 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 846 607

Injection pump

Pump designation : PES6A90D410RS2813 : 0 410 896 089 EP type number

Governor

Governer design. : RQV300...1050AB1265

: -3L

Governer no. : 0 420 212 241

: 112069 Cust. part No.

Customer-spec. information : IVECO-FIAT Customer : 8065.25.099 Motor

: 135.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.80 Tolerance mm : + - 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.75 : +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. 2.5

Spreed

10cci di icc	To	ler	an	ce
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cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s.

7.0

Rated speed rpm : 425

8.50 Rack travel in mm : : + 0.10

Tolerance mm Del. quantity

9.0 cm3/1000 strokes :

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance cm3/1000s.

4.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. 7.0

(B) SETTING OF INJECTION PUMP

WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm 750

guide sleeve

5.05 travel mm

Tolerance mm : +- 0.25

380 Rated speed rpm :

quide sleeve

1.85 travel mm

Tolerance mm 0.25

430 Rated speed rpm

guide sleeve

2.55 travel mm

Tolerance mm : +- 0.25

460 Rated speed rpm

guide sleeve

travel mm

2.85

: +- 0.25 Tolerance mm

: 1130 Rated speed rpm

guide sleeve

8.25 travel mm

: +- 0.25 Tolerance mm

GUIDE SLEEVE POSITION

control lever

position degree : - 1

Rated speed rpm : 1200

Rack travel in mm : 9.50

Tolerance mm : +- 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

1050 Rated speed rpm

Aneroid pressure

700 hPa

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s.2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. 7.0

CONTROL LEVER

control lever

position degree : 117.0 tolerance degree : +- 4.0

RATED SPEED

11.70 rack travel mm Rated speed rpm 1125

Tolerance 1/min : +-

rack travel mm 4.00

1235 Rated speed rpm

Tolerance 1/min

0.50 rack travel mm

: + 0.50Tolerance mm

Rated speed rpm : 1320

LOW IDLE

control lever

79.0 position degree

tolerance degree : +-

Setting point w/out bumper spring

Rated speed rpm	: 325
CRT mm min.	: > 11.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 535
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.75 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 14.25 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.90 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.25 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 14.20 : ← 0.05
Pressure hPa rack travel mm	: 700 : 14.20
Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 700 : 14.20 : ← 0.05 : 500 : - : 12.95
Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 14.20 : ← 0.05 : 500 : - : 12.95
Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 14.20 : + 0.05 : 500 : - : 12.95 : + 0.05

Start interlock	
Rated speed rpm Rated speed rpm	: > 290 : < 340
Check speed 1/min Check	: > 270
speed 1/min	: < 360
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	: 700
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes	: 86.0
cm3/1000 strokes Check tolerance	: + 1.5
cm3/1000s.	: +- 3.5
Aneroid pressure	• _
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 66.0
cm3/1000 strokes Check tolerance	: +- 0.5
cm3/1000s.	: +- 2.5
STARTING FUEL DEL	
ESS test: With 1 rack must reach control lever se	12 V solenoid activated start position in max. etting.
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.25 : +- 0.75
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: + 10.0

LOW IDLE

Rated speed rpm	:	425	
Rack travel in mm Tolerance mm Del. quantity	: +-	8.50 0.10	
cm3/1000 strokes	:	9.0	
cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s. Spreed	: +-	4.0	
Tolerance cm3/1000 strokes Check tolerance	:	4.5	
cm3/1000s.	:	7.0	

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 01.08.97 Test oil : ISO 4113 Combination No. : 0 400 863 008 Injection pump Fump designation : PES3A90D320/3RS2658 EP type number : 0 410 893 004 Governor Governer design. : RSV325...1500A2C505 : -3R Governer no. : 0 420 233 229 Cust. part No. : 1-7545 Customer-spec. information Customer : MWM : D226B-3 Motor Power KW : 49.5 TEST BENCH REQUIREMENTS Inlet line : 3.1 Test oil inlet temp. °C Tolerance °C Overflow valve : 1 419 992 198 Inlet press. bar : 1.5 Test nozzle holde : 0 681 343 009 assembly Opening pressure : 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2
x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 3.00 Tolerance mm : + 0.05 Check tolerance mm : +- 0.10 Rack travel in mm: 10.50 Tolerance mm: +- 1.50 Firing order : 1- 2- 3 : 0-120-240 Phasing Tolerance : +- 0.50 Check tolerance *NW : +- 0.75 Beginning of delivery differende and maximum rack 9.00 travel Difference ° CS : 4.00 BASIC SETTING Rated speed rpm : 1100 Rack travel in mm: 11.25 Tolerance mm : + 0.05Del. quantity cm3/1000 strokes : 90.0

2.0

H01

Tolerance	0.5	+
cm3/1000 strokes	: 0.5	+
		+
Check tolerance		+
cm3/1000s.	: +- 2.5	1
· · · · · · · · · · · · · · · · · · ·	2.3	1
S I		T
Spreed		†
		+
Tolerance		+
cm3/1000 strokes	: 3.0	1
	•	1
Check tolerance		1
	. 50	T
cm3/1000s.	: 5.0	T
		†
		+
		+
Rated speed rpm	: 325	1
The second second second		1
Rack travel in mm	9.80	Ţ
		Ť
Tolerance mm	: ← 0.10	+
Del. quantity		+
cm3/1000 strokes	: 49.5	1
Tolerance		1
cm3/1000 strokes	20	T
	: ← 3.0	†
heck tolerance		+
:m3/1000s.	: +- 5.0	+
Spreed		1
Tolerance		1
	. 25	T
cm3/1000 strokes	: 2.5	Ť
Check tolerance		+
cm3/1000s.	: 4.5	+
		+
		1
(B) SETTING OF IN	JECTION PUMP	1
VI FH GOVERNOR		1
TILL GOATIMAN		I
		T
		- I
GUIDE SLEEVE POST	TION	+
		†
		+
control lever		+
position degree	: - 3	+
Rated speed rpm	: 800	1
reson phoon (bill		1
da	0.50	Ţ
Rack travel in mo		+
Tolerance mm	: +- 0.20	+
		+
povernor spring		1
ore-tension		1
	. 2.50	T
click setting x	: 2.50	t
		+
 		− +
		i i
FILL LOAD DELTUER	Y AT FULL LOAD STOP	
FULL LOAD DELIVER	RY AT FULL LOAD STOP	I
		Ŧ
Rated speed rpm	Y AT FULL LOAD STOP : 1100	Ţ
Rated speed rpm		† + +
Rated speed rpm Aneroid pressure		- + + + + + + + + + + + + + + + + + + +
Rated speed rpm Aneroid pressure nPa		† †
lated speed rpm meroid pressure	: 1100 : -	+++++++++++++++++++++++++++++++++++++++

: +- 0.5
: +- 2.5
: 3.0
: 5.0
: 93.0 : + 4.0
: 10.20 : 1145 : + 5
: 4.00 : 1195 : + 15
: 0.85 : + 0.55 : 1375
: 4.00 : 1225 : + 15

rol lever tion degree : 67.0 rance degree : +- 4.0

ing point w/out bumper spring

d speed rpm : 325 travel mm : 9.30 rance mm : + 0.10

ing:

d speed rpm : 325 travel mm : 9.80 rance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 510
Tolerance 1/min : + 30

cm3/1000 strokes : 90.0

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.25 Tolerance mm : + 0.05

: 500 Rated speed rpm rack travel mm : 11.30
Tolerance mm : + 0.10

STARTING FUEL DELIVERY

100 Rated speed rpm : 18.90 rack travel mm : +- 2.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 115.0

LOW IDLE

Rated speed rpm : 325

9.80 Rack travel in mm : Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes : 49.5

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

: +- 5.0 cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

4.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.08.97 Edition Test oil

Combination No. : 0 400 863 019

Injection pump

Pump designation : PES3A90D320/3RS2826

EP type number : 0 410 893 007

Governor

Governer design. : RSV325...1150A5C505

: -5R

Governer no. : 0 420 233 289

Cust. part No. :

Customer-spec. information Customer : MWM

Motor : TD 226 B3

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1- 2- 3

: 0-120-240 : +- 0.50 Phasing Tolerance

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 9.00 Difference * CS : 4.00

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 9.90 Tolerance mm : \leftarrow 0.10

Del. quantity

cm3/1000 strokes : 68.0

Tolerance

cm3/1000 strokes : +- 0.5

H₀4

Check tolerance cm3/1000s. : +- 2.5	Check tolerance : +- 2.5 Spreed
Spreed -	Tolerance cm3/1000 strokes : 3.0
Tolerance - 3.0	Check tolerance cm3/1000s. : 5.0
Check tolerance cm3/1000s. : 5.0	
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 98.0 tolerance degree : +- 4.0
Rack travel in mm : 5.70 - Tolerance mm : + 0.10 -	RATED SPEED
Del. quantity cm3/1000 strokes : 8.0 Tolerance	rack travel mm : 8.90 Rated speed rpm : 1205 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 5.0 Spreed	Rated speed rpm : 1245 Tolerance 1/min : + 15
Tolerance - cm3/1000 strokes : 2.5	rack travel mm : 0.85
Check tolerance : 4.5 -	Tolerance mm : +- 0.55 Rated speed rpm : 1410
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1260 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION -	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 67.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50	
Tolerance mm : +- 0.20	Setting point w/out bumper spring
Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 6.20 Tolerance mm : + 0.10
governor spring pre-tension click setting x : 3.25	Rated speed rpm : 325 rack travel mm : 6.20
governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure	Rated speed rpm : 325 rack travel mm : 6.20 Tolerance mm : + 0.10
governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750	Rated speed rpm : 325 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 5.70

TORQUE CONTROL

Rated speed rpm : 1150 9.90 rack travel mm Tolerance mm : + 0.10

Rated speed rpm 500 9.95 rack travel mm : + 0.05Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1150 Rated speed rpm

Del. quantity

cm3/1000 strokes : 76.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 3.5 : +-

STARTING FUEL DELIVERY

100 Rated speed rpm : : 20.25 rack travel mm : + 0.75 Tolerance mm

Del. quantity

cm3/1000 strokes : 137.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

325 Rated speed rpm :

5.70 Rack travel in mm : : + - 0.10Tolerance mm

Del. quantity

cm3/1000 strokes : 8.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. : 4.5

End of test specification sheet

H06

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 01.08.97 Test oil : ISO 4113 Combination No. : 0 400 863 024 Injection pump Pump designation : PES3A95D410/3RS2905 EP type number : 0 410 893 996 Governor Governer design. : RSV325...1250A5C917L Governer no. : 0 420 232 639 Cust. part No. : 0423 2328 KY Customer-spec. information Customer : KHD-DMI Motor Power KW : F3L912 : 44.0 TEST BENCH REQUIREMENTS Inlet line : 3.1 Test oil inlet temp. °C : 40
Tolerance °C : + 2.0 Overflow valve : 1 419 992 198 Inlet press. bar : 1.5

x inside diameter : 2.0
x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 3.00 Tolerance mm : + 0.05 Check tolerance mm : + 0.10 Rack travel in mm : 10.50 Tolerance mm : + 1.50 Firing order : 1- 3- 2 Phasing : 0-120-240
Tolerance : +- 0.50 Check tolerance °NW : + 0.75 BASIC SETTING Rated speed rpm : 1250 Rack travel in mm : 11.35 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed

Test nozzle holde

Opening pressure
har : 173.5
har : + 1.5

Outside diameter : 6.0

Test lines : 1 680 750 014

assembly

: 0 681 343 009

Tolerance cm3/1000 strokes : 3.5	Check tolerance - cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	- CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 107.0
Rated speed (piii . 323	tolerance degree : +- 4.0
Rack travel in mm: 8.50	DATES OFFI
Tolerance mm : + 0.10 - Del. quantity -	- RATED SPEED - rack travel mm : 10.35
cm3/1000 strokes : 11.5	- rack travel mm : 10.35 - Rated speed rpm : 1295
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	nock though my 4 CC
Check tolerance - cm3/1000s. : +- 4.5	- rack travel mm : 4.00 - Rated speed rpm : 1355
Spreed	Tolerance 1/min : +- 15
Tolerance 5.5	
cm3/1000 strokes : 5.5 - Check tolerance -	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000s. : 9.9	- Rated speed rpm : 1530
7	modu topical as / 00
(B) SETTING OF INJECTION PUMP	- rack travel mm : 4.00 - Rated speed rpm : 1380
WITH GOVERNOR	Tolerance 1/min : +- 15
-	-
GUIDE SLEEVE POSITION -	
	1011 701 5
3	LOW IDLE
control lever	F COM TOTA
position degree : FREE -	control lever
	control lever position degree : 74.0
position degree : FREE Rated speed rpm : 800	control lever
position degree : FREE -	control lever position degree : 74.0
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
position degree : FREE Rated speed rpm : 800 - Rack travel in mm : 0.50 -	control lever position degree : 74.0 tolerance degree : +- 4.0
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 8.50
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 74.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1900s. : + 3.0	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1900s. : + 3.0	control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510

Rated speed rpm : 1250 rack travel mm : 11.35 : **←** 0.05 Tolerance mm

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 17.00 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 90.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

: +- 10.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 8.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 11.5 Tolerance cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : +- 4.5

Spreed

Tolerance cm3/1000 strokes : 5.5

Check tolerance

: 9.9 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 01.08.97

Test oil

: ISO 4113

Combination No.

: 0 400 864 057

Injection pump

Pump designation : PES4A90D320/3RS2659

EP type number

: 0 410 894 028

Governor

Governer design. : RSV325...1500A2C505

: -2R

Governer no.

: 0 420 233 196

Cust. part No. :

Customer-spec. information

Customer

: MWM

Motor

: D226B-4

Power KW

: 73.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

har

173.5

Tolerance bar

: **←** 1.5

Test lines

Outside diameter : 6.0

: 1 680 750 014

H10

x inside diameter : 2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

3.00 Prestroke mm

: +- 0.05 Tolerance mm Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

: + 1.50 Tolerance mm

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

9.00 travel

Difference * CS : 4.00

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm: 11.25

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 90.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance cm3/1000s. : +- 2.5	+ Check tolerance + cm3/1000s. : + 2.5 + Spreed
Spreed	Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes : 3.0	Check tolerance cm3/1000s. : 5.0
Check tolerance cm3/1000s. : 5.0	CONTROL LEVER
All results followed the second of the first file of the second of the s	+
Rated speed rpm : 325	control lever position degree : 113.0 tolerance degree : + 4.0
Rack travel in mm: 7.10 Tolerance mm: + 0.10 Del. quantity	RATED SPEED rack travel mm : 9.50
cm3/1000 strokes : 11.0 Tolerance	Rated speed rpm : 1545 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 5.0 Spreed Tolerance	Rated speed rpm : 1605 Tolerance 1/min : + 15
cm3/1000 strokes : 2.5 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000s. : 4.5	Rated speed rpm : 1780
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1630 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	
position degree : - 3 Rated speed rpm : 800	control lever position degree : 74.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Setting point w/out bumper spring
<pre>governor spring pre-tension click setting x : 4.75</pre>	Rated speed rpm : 325 rack travel mm : 6.60 Tolerance mm : + 0.10
FILE LOAD DELTUEDY AT FULL LOAD CTOD	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1500	CRT mm min. : > 19.50
Aneroid pressure hPa : -	Testing:
Del. quantity cm3/1000 strokes : 90.5	Rated speed rpm : 325 rack travel mm : 7.10 Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : +- 0.5	+
	+ rack travel mm : 2.00

Rated speed rpm : 495 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1500 rack travel mm : 11.25
Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 11.30 Tolerance mm : + 0.10

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity

cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s.: +--8.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 7.10 Tolerance mm : \leftarrow 0.10

Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

: 4.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.08.97 Test oii : ISO 4113

Combination No. : 0 400 864 094

Injection pump

Pump designation : PES4A90D320/3RS2743

EP type number : 0 410 894 034

Governor

Governer design. : RSV325...1150A5C505

: -5R

Governer no. : 0 420 233 289

Cust. part No. :

Customer-spec. information

Customer : MWM
Motor : TD226B-4
Power KW : 63.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm: +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 9.00 Difference * CS : 4.00

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 9.55

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : +- 0.5

H13

Check tolerance cm3/1000s. : + 2.5	Check tolerance cm3/1000s. : + 2.5
Spreed	+ Spreed + Tolerance
Tolerance cm3/1000 strokes : 3.0	- cm3/1000 strokes : 3.0 - Check tolerance - cm3/1000s. : 5.0
Check tolerance cm3/1000s. : 5.0	
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 100.0 tolerance degree : + 4.0
Rack travel in mm : 6.70 Tolerance mm : + 0.10	RATED SPEED
Del. quantity	+ rack travel mm : 8.50
cm3/1000 strokes : 13.0	+ Rated speed rpm : 1195
Tolerance cm3/1909 strokes : +- 3.0	Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 5.0	Rated speed rpm : 1225
Spreed Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : 2.5	rack travel mm : 0.85
Check tolerance cm3/1000s. : 4.5	+ Tolerance nm : +- 0.55 + Rated speed rpm : 1330
. 4.9	+ Nated speed (piii . 1330
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	†
position degree : - 3	- control lever
Rated speed rpm : 800	position degree : 69.0
Rack travel in mm : 0.50	tolerance degree : + 4.0
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 325
<pre>pre-tension click setting x : 3.20</pre>	+ rack travel mm : 6.20 + Tolerance mm : + 0.10
. J.20	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1150	CRT mm min. : > 19.50
Aneroid pressure	Testing:
hPa : -	Pated speed speed . 725
Del. quantity cm3/1000 strokes : 72.0	Rated speed rpm : 325 rack travel mm : 6.70
Tolerance	rack travel mm : 6.70 Tolerance mm : + 0.10
cm3/1000 strokes : + 0.5	+ rack travel mm : 2.00

Rated speed rpm : 445
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 9.55 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 9.60 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 56.0

Tolerance

cm3/1000 strokes : +- 2.5

Check tolerance

cm3/1000s. : +- 4.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 143.0

Tolerance

cm3/1000 strokes : \leftarrow 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 6.70 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.5

End of test specification sheet

H15

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 10.03.97 : ISO 4113

Combination No. : 0 400 864 102

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C861L

Governer no. : 0 420 232 624

Cust. part No. : 0423 1789 KY

Customer-spec. information Customer : KHD-DMI

Motor

: F4L912/913_NEU

Power KW

: 59.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 3.00

: + 0.05Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-- 3- 4- 2

: 0-90-180-270 Phasing

Tolerance : **←** 0.50

Check

tolerance 'NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 102.0 tolerance degree : +- 4.0
Rack travel in mm: 8.50 + Tolerance mm: + 0.10 +	RATED SPEED
Del. quantity cm3/1000 strokes : 11.5	rack travel mm : 10.35 Rated speed rpm : 1295
Tolerance cm3/1600 strokes : + 2.0	Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 4.5 + Spreed	rack travel mm : 4.00 Rated speed rpm : 1339 Tolerance 1/min : +- 15
Tolerance + cm3/1000 strokes : 5.5 + Check tolerance +	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1510
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1360 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 69.0
control lever position degree : FREE	control lever
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 69.0 tolerance degree : +- 4.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 2.00 Rated speed rpm : 473
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : +- 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Tolerance mm : 8.50

Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.08.97 Test oil : ISO 4113

Combination No. : 0 400 864 103

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C871L

Governer no. : 0 420 232 626

Cust. part No. : 0423 1876 KY

Customer-spec. information Customer : KHD-DMI

Motor : BF4L 913
Power KW : 78.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : - 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prescroke mm: : 3.00
Tolerance mm: : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.50

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000S. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 102.0 tolerance degree : +- 4.0
tacca speed i pii . Ses	totel diffe degree 4.0
Rack travel in mm: 9.60 Tolerance mm: + 0.10	RATED SPEED rack travel mm : 12.50
Del. quantity cm3/1000 strokes : 14.0 Tolerance	Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1355
cm3/1000s. : +- 4.5	Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 5.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
Check tolerance + cm3/1000s. : 9.0 +	Rated speed rpm : 1565
	rack travel mm : 4.00 Rated speed rpm : 1415
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 15
+	
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 69.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm : + 0.20	Setting point w/out bumper spring
-	Rated speed rpm : 325 rack travel mm : 9.10
governor spring pre-tension click setting x : 3.00	rack travel mm : 9.10 Tolerance mm : +- 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.50
Rated speed rpm : 1250 Aneroid pressure	Testing:
hPa : - + Del. quantity +	Rated speed rpm : 325 rack travel mm : 9.60
cm3/1000 strokes : 87.0	Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 2.00 Rated speed rpm : 605
cm3/1000s. : +- 3.0 +- 5.0 +- 5.0	Tolerance 1/min : +- 30
Tolerance cm3/1000 strokes : 3.5	TORQUE CONTROL
Check tolerance + cm3/1000s. : 8.0	Rated speed rpm : 1250 rack travel mm : 13.50 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 14.20 Tolerance mm : + 0.10

Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1400
rack travel mm : 14.20
Tolerance mm : + 0.10

Rated speed rpm : 500 : Pressure hPa rack travel mm : 13.30
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 300 rack travel mm : 13.70 Tolerance ram : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance

check tolerance cm3/1000 strokes : 6.0 8.0

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 68.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : +- 0.75

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 9.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0

theck tolerance

cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 5.5 Check tolerance

: 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.08.97 Test oil : ISO 4113

Combination No. : 0 400 864 104

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C877L

Governer no. : 0 420 232 632

Cust. part No. : 0423 2047 KY

Customer-spec. information
Customer : KHD-DMI
Motor : BF4L 913 C
Power KW : 78.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.70 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000S. : 8.0	
	- CONTROL LEVER
Rated speed rpm : 325	- control lever - position degree : 104.0 - tolerance degree : +- 4.0
Rack travel in mm: 8.50	- RATED SPEED
Tolerance mm : + 0.10 + Del. quantity	
cm3/1000 strokes : 11.5	rack travel mm : 11.70 Rated speed rpm : 1295 Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	•
Check tolerance	- rack travel mm : 4.00 - Rated speed rpm : 1355
Spreed	Tolerance 1/min : +- 15
Tolerance + 5.5	- - rack travel mm : 0.85
Check tolerance	- Tolerance mm : +- 0.55
cm3/1000s. : 9.0	- Rated speed rpm : 1555
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- Rated speed rpm : 1405 - Tolerance 1/min : +- 15
WITH GOVERNOR	-
	- -
At least the second sec	
GUIDE SLEEVE POSITION	I OU TO E
GUIDE SLEEVE POSITION	- LOW IDLE
control lever	•
control lever position degree : FREE	- - control lever
control lever position degree : FREE Rated speed rpm : 800	•
control lever position degree : FREE	- - control lever - position degree : 78.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 92.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 92.0 Tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 2.00 Rated speed rpm : 580
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 2.00 Rated speed rpm : 580

Rated speed rpm : 1250 rack travel mm : 12.70 : ← 0.05 Tolerance mm

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity

cm3/1000 strokes : 130.0 Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : ← 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

cm3/1000 strong Check tolerance 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 05,08,97 : ISO 4113

Combination No. : 0 400 864 105

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...900A1C878L

Governer no.

: 0 420 232 633

Cust. part No. : 0423 2062 KY

Customer-spec, information : KHD-DMI Customer Motor : BF4L 913

Power KW

: 64.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar : 173.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.00 Tolerance mm : + 0.05Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing Tolerance : +- 0.50

Check

tolerance *NW : + - 0.75

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.30

Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : + 1.0

: +-

3.0

Check tolerance

cm3/1000s.

Spreed

Tolerance	<u>_</u>
cm3/1000 strokes : 3.5	•
5.5	
Al. ()	CONTROL LEUED
Check tolerance	CONTROL LEVER
cm3/1000s. : 8.0 -	+
-	- control lever
	position degree : 89.0
	tolerance degree : +- 4.0
Detail area . 705	l cotto ance degree 4.0
Rated speed rpm : 325	DATES OBES
	RATED SPEED
Rack travel in mm : 8.20	rack travel mm : 12.30
Del. quantity	Rated speed rpm : 895
cm3/1000 strokes : 11.5	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : +- 2.0	rack travel mm : 4.00
· · · · · · · · · · · · · · · · · · ·	
Check tolerance	Rated speed rpm : 940
cm3/10G0s. : ⊹- 4.5	Tolerance 1/min : +- 10
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 5.5	Tolerance mm : +- 0.55
The state of the s	
Check tolerance	Rated speed rpm : 1090
cm3/1000s. ; 9.0	+
4	rack travel mm : 4.00
<u>-</u>	Rated speed rpm : 955
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
WITH GOVERNOR	
-	
	LOW IDLE
GUIDE SLEEVE POSITION	
GOIDE SEEEAE A GOILLOW	
-	control loves
-	control lever
control lever	position degree : 67.0
-	· -
control lever position degree : FREE	position degree : 67.0
control lever	position degree : 67.0 tolerance degree : +- 4.0
control lever position degree : FREE Rated speed rpm : 800	position degree : 67.0
control lever position degree : FREE Rated speed rpm : 800	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 800	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	rosition degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : -	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 8.20
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rosition degree : 67.C tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rosition degree : 67.C tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 3.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rosition degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850 rack travel mm : 13.30
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	rosition degree : 67.C tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 130.0
Tolerance
cm3/1000 strokes : + 7.5
Check tolerance
cm3/1600S. : + 10.0

LOW IDLE

Rated speed rpm : 325 Rack travel in mm: 8.20 Del. quantity cm3/1000 strokes : 11.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance 9.0 cm3/1000S.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 31.07.97 Edition Test oil : ISO 4113

Combination No. : 0 400 876 440

Injection pump

Pump designation : PES6A90D410RS2757 EP type number : 0 410 896 086

Governor

Governer design. : RSV425...1075A1C2266

: -2L

: 0 420 232 640 Coverner no.

Cust. part No. : 99459159

Customer-spec. information Customer : IVECO-FIAT

: 8065,25,085 Motor Power KW : 104.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

: 40 : + 2.0 temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : + 1.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Ser equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.30 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm: 12.90 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 102.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance + cm3/1000s. : +- 3.0 + Spreed
Spreed	Tolerance : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
	+ CONTROL LEVER
Rated speed rpm : 425	<pre>control lever position degree : 106.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 7.50	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 13.0	rack travel mm : 11.90 Rated speed rpm : 1120
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	+
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5 Spreed	+ Rated speed rpm : 1165 + Tolerance 1/min : +- 15
Tolerance	T Total and Think 15
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1340
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
	+
control lever	+
position degree : - 3 Rated speed rpm : 800	t control lever position degree : 75.0
rated speed (pii) . Coo	tolerance degree : + 4.0
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 425
pre-tension	rack travel mm : 7.00
click setting x : 4.50	Tolerance mm : + 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	+
D. 1. 1	+ CRT mm min. : > 19.50
Rated speed rpm : 1075 Aneroid pressure	Testing:
hPa : 900	resting.
Del. quantity	Rated speed rpm : 425
cm3/1000 strokes : 102.0	rack travel mm : 7.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.10
CIID/ 1000 SCI ORES . T- 1.0	rack travel mm : 2.00

Rated speed rpm Tolerance 1/min	: 555 : +- 30	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1075 : 12.90 : + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.10 : + 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 12.95 : + 0.10	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 11.30 : + 0.10	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 430 : 12.20 : + 0.10	
Pressure hPa rack travel mm Tolerance mm	: 500 : 12.55 : ← 0.05	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 700	
cm3/1000 strokes Tolerance	: 98.0	
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 4.0	
Aneroid pressure hPa		

Rated speed rpm	:		500	
Del. quantity cm3/1000 strokes	:		68.0	
Tolerance cm3/1000 strokes	:	+-	1.0	
Check tolerance cm3/1000s.	:	+	3.0	
STARTING FUEL DELI	LVI	ERY	 	 ····
Rated speed rpm	:		100	
rack travel mm	:		20.25	
Tolerance mm	:	+-	0.75	
Del. quantity			0/ 0	
cm3/1000 strokes Tolerance	:		84.0	
cm3/1000 strokes	•	+-	7.5	
Check tolerance	·			
cm3/1000s.	:	+-	10.0	
LOW IDLE				
Rated speed rpm	:		425	
Rack travel in mm	:		7.50	
Tolerance mm	:	+-	0.10	
Del. quantity cm3/1000 strokes	:		13.0	
Tolerance cm3/1000 strokes	:	+-	2.0	
Check tolerance cm3/1000s. Spreed	:	+-	4.5	
Tolerance cm3/1000 strokes	:		5.5	
Check tolerance cm3/1000s.	:		9.0	

End of test specification sheet

J02

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 13.06.95 : ISO 4113

Combination No. : 0 400 866 189

Injection pump

Pump designation : PES6A100b320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...1100A0C2190

: -65R

Governer no. : 0 420 233 304

Cust. part No. : 3921145

Customer-spec. information

Customer : CDC Motor : 6 CT

: 6 CTA 8.3ltr

Power KW : 174.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5- 3- 6- 2-

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.75

Tolerance mm : +- 0.05

J03

Del. quantity cm3/1000 strokes :	129.0
Tolerance cm3/1000 strokes : +-	1.0
Check tolerance cm3/1000s. :+-	3.0
Spreed	
Tolerance cm3/1000 strokes :	4.0
Check tolerance cm3/1000s. :	6.5
Rack travel in mm : Tolerance mm : +-	5.60 0.10
(B) SETTING OF INJECTION WITH GOVERNOR	N PUMP
GUIDE SLEEVE POSITION	
control lever position degree : - 3 Rated speed rpm : 8	300
Rack travel in mm : Tolerance mm : +-	0.50 0.20
FULL LOAD DELIVERY AT FU	JLL LOAD STOP
Rated speed rpm : 1' Aneroid pressure hPa :	100
Del. quantity cm3/1000 strokes :	129.0
Tolerance cm3/1000 strokes : +-	1.0
Check tolerance cm3/1000s. : +- Spreed	3.0
Tolerance cm3/1000 strokes :	4.0
Check tolerance cm3/1000s. :	6.5
CONTROL LEVER	

control lever position degree tolerance degree	: 95.0 : +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.70 : 1145 : +- 5
rack travel mm	: 4.00
Rated speed rpm	: 1215
Tolerance 1/min	: + 5
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1300
rack travel mm	: 4.00
Rated speed rpm	: 1220
Tolerance 1/min	: +- 15

OW		
	TDI	

control lever position degree tolerance degree	: 74.0 : + 4.0
Control lever dif Grad tolerance degree	: 21.0
Setting point w/o	ut bumper spring

Rated speed rpm	:		400
rack travel mm	:		5.10
Tolerance mm	:	+-	0.10

Rated	speed	rom	:	100
	06.000	.	•	

Testing:

Rated speed rpm	:	400
rack travel mm	:	5.60
Tolerance mm	: +	- 0.10

TO	R	Q	UE	C	0	N	T	R	0	L	
_											

Rated speed rpm	:	1100
rack travel mm	:	12.75
Tolerance mm	• •	 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 20.00 rack travel mm : Tolerance mm : **←** 1.00 Del. quantity

cm3/1000 strokes : 155.0

Tolerence

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : ← 15.0

LOW IDLE

Rack travel in mm: 5.60 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 705

Injection pump

Pump designation : PES6P120A720RS3347

EP type number : 0 412 026 777

Governor

Governer design. : RE30

: 0 421 890 029 Governer no.

Cust. part No. : RE 63514

Customer-spec. information

Customer : DEERE

Motor : 6076 HRW35

Power KW : 181.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 : + 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 : 600 x length mm

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

: +- 0.75 tolerance *NW

Start of delivery blocking

*NW after s.o.d. : 10.50

Tolerance : \leftarrow 0.50

Check

tolerance *NW : **←** 0.75

: 1 Barrel no.

(B) POSITIONER Warm-up time: 3 n=600 min-1, Ua	minutes at
TESTING & SETTI POSITION	NG RACK TRAVEL SENSOR
Engine speed mi	n-1: 0
Setting point (P, R and H pum	(d)
Uact V	: 3.100
CRT mm	: 13.00 : +/- 0.05
Tolerance mm	: +/- 0.05
Check tolerance mm	: +/- 0.10
Ol and the state	
Check value (P, R and H pum	ന)
(1) K dild II pail	,
tion to	. 1 700
Uact V CRT mm	: 1.700 : 6.15
Tolerance mm	: +/- 0.25
Check	
tolerance mm	: +/- 0.30
Setting point	
(M pump)	
Uact V	: 3.100
CRT mm	: 12.50
Tolerance mm	: +/- 0.05
Check	
tolerance mm	: +/- 0.10
Check value	
(dmpd M)	
linet V	: 1.700
Uact V CRT mm	: 5.50
Tolerance mm	: +/- 0.25
Check	
tolerance mm	: +/- 0.30
Stop position	
Uact V	: Value with
dee	energised adjusting magnet
CRT mm	: 0.75
Tolerance mm	: +/- 0.25
Check	
CRT mm Tolerance mm	energised adjusting magnet and control rod in stop position. : 0.75

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60
Amplitude V: 1.4
Tolerance V: +/- 0.6
Check

tolerance V : +/- 1.20

Erigine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 1100 Uact V 2.710 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance 9.0 cm3/1000s. FUEL DELIVERY CHARACTERISTICS

700 Rated speed rpm 2.710 Uact V Del. quantity cm3/1000 strokes : 142.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s.: +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

TEST POINT L1

Rated speed rpm : 425 Uact V : 1.400

tolerance mm

Tolerance Volt : +- 0.060 Check tolerance : + 0.060Volt Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +- 3.0Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.600
Del. quantity
cm3/1000 strokes : 100.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test cil

: 04.08.97 : ISO 4113

Combination No. : 0 402 736 848

Injection pump

Pump designation : PES6P120A120RS7314

EP type number : 0 412 726 901

Governor

Governer design. : RQV400...1250PA964

: -23K

Governer no.

: 0 421 815 374

Cust. part No. : 3921922

Customer-spec. information

Customer

: CDC

Motor

: 6BTA-A

Power KW

: 142.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

2.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

Test Lines : 1 680 750 015

Tolerance Check

Check

Firing order

tolerance *NW

Phasing

: +- 0.75

: +- 0.50

: -300

Start of delivery blocking

Outside diameter : 6.0

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

Test pressure bar : 17.0 Tolerance bar : + 1.0

tolerance mm : + 0.10

Rack travel in mm: 12.50

Tolerance mm : \leftarrow 0.50

BEGINNING OF DELIVERY

Prestroke mm : +-

per values ____

3.0

3.60

: 1-5-3-6-2-

: 0-60-120-180-240

: +- 0.05

600

x inside diameter:

x length mm :

REMARKS

*NW after s.o.d. : 5.75

Tolerance

: +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

1150

Rack travel in mm: 14.00

109

Tolerance mm : + 0.05	
Del. quantity cm3/1000 strokes : 169.5	CONTROL LEVER
Tolerance cm3/1000 strokes : + 1.0	<pre>control lever position degree : 116.5 tolerance degree : +- 6.0</pre>
Check tolerance cm3/1000s. : + 4.0	RATED SPEED rack travel mm : 13.00
Spreed	Rated speed rpm : 1300 Tolerance 1/min : + 15 Check
Tolerance cm3/1000 strokes : 8.0	speed 1/min : +- 20
Check tolerance cm3/1000s. : 12.0	rack travel mm : 4.00 Rated speed rpm : 1465 Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Rated speed rpm : 420	rack travel mm : 0.50 Tolerance mm : + 0.50
Rack travel in mm: 5.70 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 13.0	Rated speed rpm : 1550
Tolerance cm3/1000 strokes : + 3.0 Check tolerance	LOW IDLE
cm3/1000s. : +- 5.0 Spreed Tolerance	control Lever position degree : 73.0
cm3/1000 strokes : 4.0 + Check tolerance +	tolerance degree : +- 6.0
cm3/1000s. : 8.0	Control lever difference Grad : 43.5 tolerance degree : +- 6.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring
	Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 8.50
Rated speed rpm : 1150 Aneroid pressure	Testing:
hPa : 1200 + Del. quantity +	Rated speed rpm : 420 rack travel mm : 5.70
cm3/1000 strokes : 169.5	Tolerance mm : + 0.20
cm3/1000 strokes : + 1.0 + Check tolerance	Rated speed rpm : 420
cm3/1000s. : + 4.0 Spreed Tolerance	TORQUE CONTROL Rated speed rpm : 1150
cm3/1000 strokes : 8.0 + Check tolerance +	rack travel mm : 14.00 Tolerance mm : +- 0.05
cm3/1000s. : 12.0	Rated speed rpm : 800

rack travel mm	: 12.60	+ Toleran
Tolerance mm	: +- 0.20	+ cm3/100 + Check 1
Rated speed rpm	: 1250	+ cm3/100
rack travel mm Tolerance mm	: 13.90	+
Tolerance mm	: + 0.10	†
		+ Aneroid - + hPa
ANEROID/ALTITUDE		Rated
COMPENSATOR TEST		+ Del. qu
		+ cm3/100
		+ Tolera
SETTING		+ cm3/100
Daniel americal man	. 4450	+ Check
Rated speed rpm Pressure hPa	: 1750 : 1200	+ cm3/10
rressure nra	: 1200	Ī
Rated speed rpm	• 1150	I
Pressure hPa	: -	STARTI
rack travel mm	: 11.25	+
Tolerance mm	: +- 0.20	Rated
		+ rack t
MEASUREMENT		Tolera
	4455	+ Del. q
Rated speed rpm	: 1150	+ cm3/10
Danas Lon		+ Tolera
Pressure hPa	: 13.15	+ cm3/10
rack travel mm Tolerance mm	: + 0.30	+ Check + cm3/10
Oteranice min	. += 0.30	I
Pressure hPa	: 375	1
rack travel mm	: 12.05	+
Tolerance mm	: ← 0.20	+
		+ LOW ID
Start interlock		Rated
Data d mass d mass	. > 400	+ Book +
Rated speed rpm Rated speed rpm		+ Rack t + Tolera
katen sheen thii	: \ 313	+ Del. q
Check		cm3/10
speed 1/min	: > 80	Tolera
Check		- cm3/10
speed 1/min	: < 325	Check
		+ cm3/10
Branch of the second of the second		- + Spreed
FUEL DELIVERY CHA	RACIERISTICS	+ Tolera
		+ cm3/10 + Check
Aneroid pressure		cm3/10
hPa	: 1200	I (m5/10
Rated speed rpm		1
Del. quantity	. 000	1
cm3/1000 strokes	: 141.0	ļ
Tolerance		+
cm3/1000 strokes	: + 3.0	+ End of
Check tolerance		+
cm3/1000s.	: +- 6.0	+
Spreed		+

Tolerance cm3/1000 strokes check tolerance cm3/1000s. Ineroid pressure clated speed rpm cel. quantity cm3/1000 strokes colerance cm3/1000 strokes check tolerance cm3/1000s.	: 12.0 : - : 1150
STARTING FUEL DELI Rated speed rpm rack travel mra Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 100 : 13.75 : + 0.50 : 155.0
Rated speed rpm Rack travel in mm Folerance mm Del. quantity DM3/1000 strokes Folerance DM3/1000s. Dered Folerance DM3/1000s. Dered Folerance DM3/1000s. Dered Tolerance DM3/1000s. Dered Tolerance DM3/1000s.	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 736 867

Injection pump

Pump designation : PES6P120A120RS7350

EP type number : 0 412 726 921

Governor

Governer design. : RQV400...1150PA1172K

Governer no. : 0 421 815 438

Cust. part No. : 3928147,3934242(new)

Customer-spec. information : CDC Customer : 6BTA-A Motor Power KW : 142.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm Check

: +- C.10 tolerance mm

Rack travel in mm : 12.50 Tolerance mm : + 0.50

: 1-5- 3- 6- 2-Firing order

: 4

: 0-60-120-180-240 Phasing

Start of delivery blocking

*NW after s.o.d. : 5.75 : **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.00 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 167.5

		1
Tolerance cm3/1000 strokes	: + 1.0	control lever position degree : 116.5 tolerance degree : +- 6.0
Check tolerance cm3/1000s.	: + 4.0	RATED SPEED : 13.00
Spreed	المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة	Rated speed rpm : 1300 Tolerance 1/min : + 15
Tolerance cm3/1900 strokes	; 8.0	Check : + 20
Check tolerance cm3/1000s.	: 12.0	rack travel mm : 4.00 Rated speed rpm : 1465 Tolerance 1/min : +- 5 Check
Rated speed rpm	: 420	speed 1/min : + 10
Rack travel in mm Tolerance mm		rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1550
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes		
Check tolerance cm3/1000s. Spreed	: +- 5.0	LOW IDLE
Tolerance cm3/1000 strokes Check tolerance		control lever position degree : 73.0 tolerance degree : +- 6.0
cm3/1000s.	: 8.0	Control lever difference Grad: 43.5
(B) SETTING OF INJ WITH GOVERNOR	JECTION PUMP	tolerance degree : +- 6.0
		Setting point w/out bumper spring
FULL LOAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm : 300
Rated speed rpm	: 1150	CRT mm min. : > 8.50
Aneroid pressure	: 1200	Testing:
Del. quantity cm3/1000 strokes Tolerance		Rated speed rpm : 420 rack travel mm : 6.10 Tolerance mm : +- 0.20
cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 4.0	Rated speed rpm : 420
Tolerance cm3/1000 strokes Check tolerance	: 8.0	TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 14.00
cm3/1000s.	: 12.0	Tolerance mm : + 0.05
CONTROL LEVER		Rated speed rpm : 800 rack travel mm : 12.60 Tolerance mm : + 0.20

: 420 : 6.10 : + 0.20 : 420 : 1150 : 14.00 : + 0.05 Rated speed rpm : 800 rack travel mm : 12.60 Tolerance mm : + 0.20

Rated speed rpm rack travel mm Tolerance mm	: 1250 : 14.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1150 : 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1150 : - : 10.95 : + 0.20
MEASUREMENT	
Rated speed rpm	: 1150
Pressure hPa rack travel mm Tolerance mm	: 500 : 12.85 : + 0.30
Pressure hPa rack travel mm Tolerance mm	: 375 : 11.75 : + 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 315
Check speed 1/min	: > 80
Check speed 1/min	: < 325
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 800
cm3/1000 strokes	: 141.0
Tolerance cm3/1000 strokes Check tolerance	: - 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Aneroid pressure hPa Rated speed rpm	: -
Del. quantity	
cm3/1000 strokes	: 106.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance	
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 13.75
Tolerance mm Del. quantity	: +- 0.50
cm3/1000 strokes	: 155.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: +- 25.0
LOW IDLE	
	: 420
Rated speed rpm Rack travel in mm	6.10
Rated speed rpm Rack travel in mm Tolerance mm	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 6.10 : +- 0.20
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 6.10 : +- 0.20 : 13.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 6.10 : +- 0.20
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 6.10 : +- 0.20 : 13.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 6.10 : +- 0.20 : 13.0 : +- 3.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 6.10 : +- 0.20 : 13.0 : +- 3.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 6.10 : +- 0.20 : 13.0 : +- 3.0 : +- 5.0 : 4.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 6.10 : +- 0.20 : 13.0 : +- 3.0 : +- 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 796 821

Injection pump

Pump designation : PES6P120A720RS7407

EP type number : 0 412 726 955

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 67492

Customer-spec. information Customer : DEERE Motor : 6101HZ013 Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 077

2.0 Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 : +- 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25

: + 0.50Tolerance

Check

tolerance *NW : + 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

travel : 15.00

Difference • CS	:	3.75
(B) POSITIONER TES Warm-up time: 3 m n=600 min-1, Uact	inutes	
TESTING & SETTING POSITION	RACK	TRAVEL SENSOR
Engine speed min-	1:	0
Setting point (P, R and H pump)		
Uact V CRT mm Tolerance mm Check	: +/-	
tolerance mm	: +/-	0.10
Check value (P, R and H pump)		
Uact V CRT mm Tolerance mm Check tolerance mm	: : +/- : +/-	1.700 6.15 0.25 0.30
Setting point (M pump)		
Uact V CRT mm Tolerance mm Check tolerance mm	: : +/- : +/-	3.100 12.50 0.05
Check value (M pump)	• ',	0.10
Uact V CRT mm Tolerance mm Check tolerance mm		
Stop position		
Uact V deene	rgised and	ue with adjusting magnet control rod in
CRT mm		p position. 0.75

Tolerance mm	
TOLE WILL WILL	: +/- 0.25
Check	
tolerance mm	: +/- 0.35
ENGINE-SPEED SENS	
(ALL P and R pumps	s not
H and M pumps)	
•	
Test with control	roa
in stop position	
Engine speed min-	1. 40
Amplitude V	: 1.4
	*
Tolerance V Check	: +/- 0.6
	: +/- 1.20
tolerance V	: T/~ 1.2U
Engine speed min-	1. 400
Difference	1. 000
Amplitude to	
Amplitude V	: max.1.4
WIND LEGICE A	· IIIQA · I · · · · ·
(C) INJECTION PUM	P WITH POSITIONER
TEST POINT V1	
Rated speed rpm	: 1050
Uact V	: 3.030
Del. quantity	
cm3/1000 strokes	: 213.0
Tolerance	
Tolerance cm3/1000 strokes	: 213.0 : ← 1.0
Tolerance cm3/1000 strokes Check tolerance	
Tolerance cm3/1000 strokes	
Tolerance cm3/1000 strokes Check tolerance	: + 1.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 5.0 : 9.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0 : 5.0 : 9.0 RACTERISTICS
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA	: +- 1.0 : +- 4.0 : 5.0 : 9.0 RACTERISTICS
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA	: +- 1.0 : +- 4.0 : 5.0 : 9.0 RACTERISTICS
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0 : + 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0 : + 6.0 : 8.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0 : + 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 700 : 3.120 : 237.0 : + 3.0 : + 6.0 : 8.0

450 Rated speed rpm 1.740 Uact V : +- 0.060 Tolerance Volt Check tolerance : + 0.060Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000s. : +- 25.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 24.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 823

Injection pump

Pump designation : PES6P120A720RS7356 EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 67884

Customer : DEERE

Motor : 6081 HRW 05

Power KW : 198.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25

Tolerance : + 0.50 Check

tolerance $^{\bullet}NW$: \leftarrow 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00

Difference * CS : 2.50 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 : +/- 0.05 Tolerance mm Check tolerance mm : ± -0.10 Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Setting point (amua M) 3.100 Uact V : 3.100 : 12.50 CRT mm Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (qmuq M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position.

0.75

CRT mm

J19

Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1050 3.030 Uact V Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 : Uact V 3.120 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance 8.0 cm3/1000 strokes :

12.0

Rated speed rpm Uact V Tolerance Volt Check tolerance	:	+	450 1.740 0.060
Volt	:	+	0.060
Del. quantity cm3/1000 strokes	:		26.0
Tolerance cm3/1000 strokes	:	+-	3.0
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:		6.0
cm3/1000s.	:		10.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Uact V	:	4.550
Del. quantity		
cm3/1000 strokes	:	120.0
Tolerance		
cm3/1000 strokes	: +-	20.0
Check tolerance		
cm3/1000s.	: +-	25.0
	-	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.07.97 Test oil : ISO 4113

Combination No. : F 002 A0Z 006

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1100AOC880R

Governer no. : F 002 A20 206

Cust. part No. : 3930154

Customer-spec. information Customer : CDC Motor : 4BT3.9 Power KW : 63.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : ← 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 6.50 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.80 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 97.5

Tolerance	+ Tolerance
cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 3.0
cm3/1000s. : +- 3.0	+ Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
opi ccq	+ Check tolerance
Tolerance	- cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	T (m3/10003 0.5
CMD/ 1000 Strakes . 4.0	Ť
Check tolerance	Ť
cm3/1000s. : 6.5	CONTROL LEVER
Cm5/10005. : 6.5	T CONTROL LEVER
	The same of Javan
	+ control lever
	+ position degree : 108.0
Rated speed rpm : 475	†
	+ RATED SPEED
Rack travel in mm: 5.65	+ rack travel mm : 10.80
Tolerance mm : + 0.10	+ Rated speed rpm : 1155
Del. quantity	+ Tolerance 1/min : + 5
cm3/1000 strokes : 20.5	+
Tolerance	rack travel mm : 6.00
cm3/1000 strokes : +- 2.0	+ Rated speed rpm : 1220
Check tolerance	+ Tolerance 1/min : + 5
cm3/1000s. : + 4.5	1 Total direction in the second secon
Spreed	rack travel mm : 0.85
Tolerance	Tolerance mm : +- 0.55
	+ Rated speed rpm : 1400
Check tolerance	T
cm3/1000s. : 8.0	+ rack travel mm : 6.00
	+ Rated speed rpm : 1220
	† Tolerance 1/min : + 15
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
	+
A CAR AL PRINT PARTY AND	+ LOW IDLE
GUIDE SLEEVE POSITION	†
	†
	+ control lever
control lever	+ position degree : 89.0
position degree : - 3	†
Rated speed rpm : 800	+ Control lever difference
	+ Grad : 19.0
Rack travel in mm: 0.50	tolerance degree : + 4.0
Tolerance mm : + 0.20	+
	+ Setting point w/out bumper spring
governor spring	+
pre-tension	Rated speed rpm : 475
click setting x : 5.00	rack travel mm : 5.15
COUNTY A COUNTY A	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
TOLL COND DECITEM AT TOLL COMD OTO	Tracea opeca i piii
Rated speed rpm : 1100	+ CRT mm min. :> 19.00
Aneroid pressure	
hPa : -	Testing:
	I resume.
Del. quantity cm3/1000 strokes : 97.5	T Pated speed rom
Cm3/1000 Strokes : 77.3	+ Rated speed rpm : 475

rack travel mm : 5.65 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 11.80 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 12.10 Tolerance mm : +- 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 100.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : -- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 122.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : **←** 15.0 LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 5.65
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 20.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 31.07.97 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 071

Injection pump

Pump designation: PES6A95D320/3RS2928

EP type number : F 002 A10 019

Governor

Governer design. : RSV450...900A4c949R

Governer no. : F 002 A20 247

Cust. part No. : 3933099

Customer-spec. information Customer : CDC : 6CT 8.3 Motor Power KW : 104.3

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.50 Tolerance

Check

: **←** 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 11.85 Tolerance mm : + 0.05

+	Aneroid pressure
Del. quantity	hPa : -
cm3/1000 strokes : 109.0	Del. quantity
Tolerance	cm3/1000 strokes : 109.0 Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0
	Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0 +	Spreed Tolerance
Spreed	cm3/1000 strokes : 4.0
opi ecu	Check tolerance
Tolerance +	cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	
Check tolerance +	
cm3/1000s. : 6.5	CONTROL LEVER
+	control lever
Partial annual page (25)	position degree : 108.5 tolerance degree : +- 4.0
Rated speed rpm : 425	tolerance degree : +- 4.0
Rack travel in mm: 9.00	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.80
Del. quantity +	Rated speed rpm : 945
cm3/1000 strokes : 32.0	Tolerance 1/min : +- 5
Tolerance + 2.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 995
cm3/1000s. : + 4.5	Tolerance 1/min : + 5
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 6.0	Tolerance mm : + 0.55
Check tolerance + cm3/1000S. : 8.0 +	Rated speed rpm : 1050
- 10003.	rack travel mm : 4.00
}	Rated speed rpm : 1000
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 5
WITH GOVERNOR +	
İ	
GUIDE SLEEVE POSITION +	LOW IDLE
†	
control lever	control lever
position degree : -3	position degree : 88.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 20.5
covernor enring	tolerance degree : +- 6.0
governor spring + pre-tension +	Setting point w/out bumper spring
click setting x : 3.25	· · · · · · · · · · · · · · · · · · ·
+	Rated speed rpm : 100
FILL LOAD DELTHERY AT SHALLOAD CTOD	CRT mm min. :> 19.00
FULL LOAD DELIVERY AT FULL LOAD STOP	CKT MM MITTE 2 17.00
Rated speed rpm : 900	Testing:
Construction of the last terms	

Rated speed rpm : 425 rack travel mm : 9.00 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 11.85 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 425

Rack travel in mm : 9.00
Tolerance mm : +- 0.10
Del. quantity
cm3/1000 strokes : 32.0

Tolerance cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 12.08.97

Combination No. : 0 400 866 214

Injection pump

Pump designation : PES6A100D320/3RS2691

: -4

EP type number : 9 410 230 030

Governor

Governer design. : RSV450...1100A0c2190

: -34R

Governer no. : 0 420 233 323

Cust. part No. : 3921095

Customer-spec. information Customer : CDC Motor

: 6CT830

Power KW

: 134.2

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

har

: 208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00 : **←** 0.50

Tolerance

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.25
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 104.5	+ Aneroid pressure + hPa : - Del. quantity
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000 strokes : 104.5 Tolerance
Check tolerance cm3/1000s. : +- 3.0	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 3.0
Spreed	+ Spreed + Tolerance + cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVED
	+ CONTROL LEVER
Rated speed rpm : 450	control lever position degree : 103.0 tolerance degree : +- 4.0
Rack travel in mm : 5.80 Tolerance mm : + 0.10	RATED SPEED
Del. quantity	rack travel mm : 10.20
cm3/1000 strokes : 18.5 Tolerance	+ Rated speed rpm : 1145 + Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	+
Check tolerance cm3/1000s. : + 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1225
Spreed : — 4.5	+ Rated speed rpm : 1225 + Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : 6.0 Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
cm3/1000s. : 8.0	Rated speed rpm : 1300
	t mark traval and / 00
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 4.00 + Rated speed rpm : 1230
WITH GOVERNOR	Tolerance 1/min : + 15
	1
	Ţ
GUIDE SLEEVE POSITION	LOW IDLE
control lever	+
position degree : - 3 Rated speed rpm : 800	+ control lever + position degree : 85.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	+ Control lever difference + Grad : 18.0
governor spring	tolerance degree : + 4.0
pre-tension	Catting point Wout human chains
click setting x : 4.25	+ Setting point w/out bumper spring
But I AAA ASI TURAN ASI SUU SA SA SA SA SA SA SA SA SA SA SA SA SA	Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 5.30 + Tolerance mm : + 0.10
Rated speed rpm : 1100	+
	+ Rated speed rpm : 100

CRT mm min. : > 19.00 Testing: Rated speed rpm : 450 rack travel mm : 5.80 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel rmm : 12.10 Tolerance mm : \leftarrow 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 113.5 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : \leftarrow 0.50 Del. quantity cm3/1000 strokes : 148.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance : +- 15.0 cm3/1000s. LOW IDLE Rated speed rpm : 450

Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 8.0

End of test specification sheet

Rack travel in mm: 5.80 Tolerance mm: + 0.10 Del. quantity

cm3/1000 strokes : 18.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.08.95 Test oi! : ISO 4113

Combination No. : 0 400 876 399

Injection pump

Pump designation : PES6A100D410RS2754 EP type number : 0 410 806 002

Er cype richiber . 0 41

Governor

Governer design. : RSV425...1100A0C2234

: -3L

Governer nc. : 0 420 232 577

Cust. part No. : RE51910

Customer—spec. information Customer : DEERE

Motor : 6076TRW01 Power KW : 106.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2!!!!!

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 13.50 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 10.50 Difference * CS : 7.00

BASIC SETTING

Rated speed rpm : 1100

1100

Rack travel in mm: 9.75	
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 1100
cm3/1000 strokes : 90.0	Aneroid pressure hPa : -
Tolerance	nPa : - Del. quantity
cm3/1000 strokes : + 1.0	cm3/1000 strokes : 90.0
-	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
tilis/10003 — 3.0	cm3/1000s. : +- 3.0
Spreed	Spreed
+	Tolerance
Tolerance + 4.9	cm3/1000 strokes : 4.0 Check tolerance
cm3/1000 strokes : 4.9	cm3/1000S. : 6.5
Check tolerance	
cm3/1000s. : 6.5	
	CONTROL LEVER
Ţ	CONTROL LEVEN
Rated speed rpm : 425	control lever
.	position degree : 98.0
Rack travel in mm: 5.80 + Tolerance mm: + 0.10 +	tolerance degree : \leftarrow 4.0
Del. quantity	RATED SPEED
cm3/1000 strokes : 28.0	rack travel mm : 8.70
Tolerance	Rated speed rpm : 1150 _
cm3/1000 strokes : + 2.0	Tolerance 1/min : + 5
Check tolerance cm3/1000s. : ← 4.5	rack travel mm : 4.00
Spreed	Rated speed rpm : 1205
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : 6.0	mode deposed on a COSE
Check tolerance + cm3/1000s. : 8.0 +	rack travel mm : 0.85 Tolerance mm : + 0.55
1	Rated speed rpm : 1350
+	
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1215 Tolerance 1/min : + 15
\downarrow	roceration (rate)
GUIDE SLEEVE POSITION	
Ţ	LOW IDLE
control lever	
position degree : - 3	
Rated speed rpm : 800	control lever position degree : 74.0
Rack travel in mm: 0.50	tolerance degree : + 4.0
Toterance mm : + 0.20	
+	Setting point w/out bumper spring
governor spring + pre-tension +	Rated speed rpm : 425
click setting x : 4.00	rack travel mm : 5.30
+	Tolerance mm : + 0.10
1	

Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: 425 Rated speed rpm : rack travel mm : 5.80 : + 0.10 Tolerance mm TORQUE CONTROL Rated speed rpm : 1100 9.75 rack travel mm : : +- 0.05 Tolerance mm Rated speed rpm : 700 : 10.80 rack travel mm ; +- 0.10 Tolerance mm Start interlock Rated speed rpm : > 100 Check speed 1/min ; > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 112.5 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance : +- 4.0 cm3/1000s. STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance : +- 15.0 cm3/1000s.

Rated speed rpm : 425 5.80 Rack travel in mm : Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance : cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 776 814

Injection pump

Pump designation : PES6P120A320LS7285 EP type number : 0 412 726 892

Governor

Governer design. : RSV350...1000P4A564

Governer no. : 0 421 833 413

Cust. part No. : 1821048091

Customer—spec. information
Customer : NAVISTAR
Motor : DTA-531
Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.93
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 12.85
Tolerance mm: + 0.05

Del. quantity cm3/1000 strokes : 201.0

K05

Tolerance	
cm3/1000 strokes	: ← 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed	
Yolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rared speed rpm	: 350
Rack travel in mm	: 5.90
Tolerance mm Del. quantity	: + 0.10
cm3/1000 strokes	: 32.5
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000S. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
	: 12.0 JECTION PUMP
cm3/1000s. (B) SETTING OF INWITH GOVERNOR	: 12.0 JECTION PUMP
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE POSITION to degree	: 12.0 JECTION PUMP TION : - 1 : 800
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE POSITION degree Rated speed rpm Rack travel in mm	: 12.0 JECTION PUMP TION : - 1 : 800 : 0.50 : + 0.20
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE POSIT control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: 12.0 JECTION PUMP TION : - 1 : 800 : 0.50 : + 0.20
cm3/1000s. (B) SETTING OF INAWITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVERY	: 12.0 JECTION PUMP TION : - 1 : 800 : - 0.50 : + 0.20 : 5.00
cm3/1000s. (B) SETTING OF INAWITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVERY	: 12.0 JECTION PUMP TION : - 1 : 800 : - 0.50 : + 0.20 Y AT FULL LOAD STOP

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0 : 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 111.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.80 : 1055 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1105 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1150
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1110 : + 5
LOW IDLE	

control lever
position degree : 75.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

Rated speed rpm : 350 rack travel mm : 5.90 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1000

rack travel mm	:	12.85
Tolerance mm	: +-	0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	1000
Pressure hPa	:	1500
rack travel mm	:	12.85
Tolerance mm	:	+ 0.05

Rated speed rpm	:	1000
Pressure hPa	:	
rack travel mm	:	7.90
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated	speed	rpm	:	1000
-------	-------	-----	---	------

Pressure hPa	:	850
rack travel mm	:	11.50
Tolerance mm	: +	- 0.20

Pressure hPa	:	350
rack travel mm	:	8.95
Tolerance mm	: +	- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm		500
Del. quantity		

cm3/1000 strokes : 87.5

Tolerance cm3/1000 strokes : +- 2.0

Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm	:	100 20.00
Tolerance mm Del. quantity	: +-	1.00

cm3/1000 strokes : 185.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm	:	350	
Rack travel in mm Tolerance mm Del. quantity	: +-	5.90 0.10	
711000	:	32.5	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed Tolerance			
cm3/1000 strokes	:	8.0	
Check tolerance cm3/1000S.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 05.08.97 : ISO 4113

Combination No. : 0 402 746 635

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 472 726 933

Governor

Governer design. : RQV275...1100PA1356K

Governer no. : 0 421 815 557

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8460.41T.2036 Motor

: 185.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

: ← 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : \leftarrow 0.75

Start of delivery mark

Check

tolerance *NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.40

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 202.0	Tolerance mm : +- 0.25 Rated speed rpm : 1440
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	
Tolerance - cm3/1000 strokes : 5.0 -	Rated speed rpm : 1100 Aneroid pressure hPa : 1200
Check tolerance - cm3/1000S. : 9.0	Del. quantity cm3/1000 strokes : 202.0 Tolerance
Cm5/10005. : 9.0	cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 275	cm3/1000s. : +- 4.0 Spreed Tolerance
Rack travel in mm: 6.20 - Tolerance mm: + 0.10	cm3/1000 strokes : 5.0 Check tolerance
Tolerance mm : + 0.10 - Del. quantity - cm3/1000 strokes : 19.0 -	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : + 3.0 -	CONTROL LEVER
Check tolerance - cm3/1000S. : + 6.0 - Spreed	CONTROL LEVER control lever
Tolerance - cm3/1000 strokes : 8.0 -	position degree : 116.9 tolerance degree : +- 4.0
Chack tolerance - cm3/1000s. : 12.0 -	RATED SPEED
(B) SETTING OF INJECTION PUMP	rack travel mm : 10.50 Rated speed rpm : 1145 Tolerance 1/min : +- 5
WITH GOVERNOR	Check
GUIDE SLEEVE TRAVEL	rack travel mm : 4.00
Rated speed rpm : 1155 - guide sleeve -	Rated speed rpm : 1220 Tolerance 1/min : +- 15 Check
travel mm : 9.76 - Tolerance mm : + 0.15 -	speed 1/min : +- 20
Rated speed rpm : 275	rack travel mm : 0.50 Tolerance mm : +- 0.50
guide sleeve travel mm : 1.70	Rated speed rpm : 1350
Tolerance mm : + 0.20 - Rated speed rpm : 791 -	
guide sleeve - 6.42	LOW IDLE
Tolerance mm : + 0.25	control lever
Rated speed rpm : 460 - guide sleeve -	position degree : 75.0 tolerance degree : +- 4.0
travel mm : 3.77	+

K09

Setting point w/o	out bumper spring	†
Rated speed rpm	: 175	Start interlock
CRT mm min.	: > 7.70	Rated speed rpm : > 180 Rated speed rpm : < 220
Testing:		Check
Rated speed rpm rack travel mm Tolerance mm	: 6.20	speed 1/min : > 160 Check speed 1/min : < 240
Rated speed rpm	: 315	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 10.40 : + 0.05 : 800 : 11.30	Aneroid pressure hPa : 1200 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 216.0 Tolerance cm3/1000 strokes : + 3.0
Rated speed rpm rack travel mm Tolerance mm	: 11.70	Check tolerance cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm Tolerance mm		Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 145.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
SETTING		<u> </u>
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1200 : 11.70 : +- 0.10	STARTING FUEL DELIVERY Set starting CRT at K-cam.
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: – : 9.40	Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0
MEASUREMENT		+ Tolerance
Rated speed rpm	: 600	+ cm3/1000 strokes : + 15.0 + Check tolerance + cm3/1000s. : + 19.0
Pressure hPa rack travel mm Tolerance mm	: 280 : 10.10 : ← 0.20	17.0
Pressure hPa rack travel mm Tolerance mm	: 410 : 11.20 : + 0.10	LOW IDLE Rated speed rpm : 275

K10

Rack travel in mm Tolerance mm	:	+ -	6.20 0.10
Del. quantity cm3/1000 strokes Tolerance	:		19.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s.	:	+	6.0
Tolerance cm3/1000 strukes Check tolerance	:		8.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.08.97 Test oil : ISO 4113

Combination No. : 0 402 846 078

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1225

Governer no. : 0 421 814 151

Cust. part No. : 11031993

: -P02 v.03/97

Customer-spec. information

Customer : VCE
Motor : TD122KAE
Power KW : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160
Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: −300 : +− 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Dook town in on a 11 40	† Batad aread area (200
Rack travel in mm : 11.60 Tolerance mm : + 0.05	+ Rated speed rpm : 490 + guide sleeve
No. diantity	+ travel mm : 4.65 + Tolerance mm : +- 0.25
Del. quantity cm3/1000 strokes : 236.0	+ Toterance man : += 0.25
Talanana	Rated speed rpm : 1300
Tolerance cm3/1000 strokes : +- 1.0	+ guide sleeve + travel mm : 11.50
Check tolerance	† Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	
Spreed	T GUIDE SLEEVE POSITION
	+
Tolerance cm3/1000 strokes : 8.0	+ control lever + position degree : -1
	Rated speed rpm : 1190
Check tolerance cm3/1000s. : 11.0	Rack travel in mm: 10.60
	Tolerance mm : + 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 3.60	Rated speed rpm : 700
Tolerance mm : +- 0.10 Del. quantity	Aneroid pressure : 1500
cm3/1000 strokes : 23.0	Del. quantity
Tolerance	+ cm3/1000 strokes : 236.0
cm3/1000 strokes : + 3.0 Check tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0
c.m3/1000s. : - 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 4.0 + Spreed
Tolerance cm3/1000 strokes : 5.0	Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance + cm3/1000s. : 11.0
	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Dated and days a 4474	position degree : 62.0
Rated speed rpm : 1131 guide sleeve	tolerance degree : +- 4.0
travel mm : 8.61	+ control lever
Tolerance mm : + 0.15	<pre>position degree : 122.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 325	+
guide sleeve travel mm : 2.04	+ RATED SPEED + rack travel mm : 10.60
Tolerance mm : + 0.20	Rated speed rpm : 1120
Dated around now : 1079	Tolerance 1/min : +- 5
Rated speed rpm : 1038 guide sleeve	rack travel mm : 4.00
travel mm : 7.03	Rated speed rpm : 1180
Tolerance mm : + 0.25	+ Tolerance 1/min : +- 15

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 64.0 : +- 4.0
control lever position degree tolerance degree	: 14.0 : + 4.0
Secting point w/ou	t bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 5.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.60 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.60 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 11.60 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.00 : +- 0.20
MEASUREMENT	

Pressure hPa	: 520
rack travel mm	: 1.30
Tolerance mm	: +- 0.20
Pressure hPa	: 290
rack travel mm	: 0.25
Tolerance mm	: +- 0.05
FUEL DELIVERY CHAP	PACTERISTICS
TOLE DELIVERY OFFICE	MACIENTOTICS
Aneroid pressure	
hPa	: -
Rated speed rpm	: 700
Del. quantity cm3/1000 strokes	: 188.0
Tolerance	. 100.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
כשטייין יכשט.	; +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: ← 0.50
Del. quantity cm3/1000 strokes	: 155.0
Tolerance	. 177.0
cm3/1000 strokes	: +- 15.0
Check tolerance cm3/1000s.	: +- 19.0
CM3/ 10003.	
LOW IDLE	
	700
Rated speed rpm	: 325
Rack travel in mm	
Tolerance mm Del. quantity	: +- 0.10
cm3/1000 strokes	: 23.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1090S.	: +- 6.0
Spreed	
Tolerance	. 50
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 8.0

Rated speed rpm : 500

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.08.97 Test oil : ISO 4113

Combination No. : 0 402 846 079

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031994

: -P02 V.06.97

Customer-spec. information

Customer : VCE

Motor : TD122KFE Power KW : 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 145 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no.	: 1	Rated speed rpm : 325 guide sleeve
	‡	travel mm : 2.04 Tolerance mm : +- 0.20
BASIC SETTING	1	Rated speed rpm : 1038
	+	guide sleeve
Rated speed rpm	: 700 +	travel mm : 7.03
		Tolerance mm : +- 0.25
Rack travel in mm	: 13.25	Rated speed rpm : 490
Tolerance mm	: ← 0.05 +	guida sleeve
		travel mm : 4.65
Del. quantity cm3/1000 strokes	: 298.0	Tolerance mm : +- 0.25
CIID/ (UUU SCI OKES	· 270.0	Rated speed rpm : 1300
Tolerance		guide sleeve
cm3/1000 strokes	: + 1.0 I	travel mm : 11.50
CIIID/ 1000 SCI OKES	I	Tolerance mm : +- 0.50
Check tolerance	I	
cm3/1000s.	: +- 4.0	
		GUIDE SLEEVE POSITION
Spreed	1	
Tolerance	1	control lever
cm3/1000 strokes	: 8.0	position degree : - 1
		Rated speed rpm : 1190
Check tolerance	+	•
cm3/1000s.	: 11.0 +	Rack travel in mm : 12.20
		Tolerance mm : +- 1.30
	†	,
Rated speed rpm	: 325	FULL LOAD DELIVERY AT FULL LOAD STOP
·	}	
Rack travel in mm	<u> </u>	Rated speed rpm : 700
Tolerance mm	: + 0.10 +	Aneroid pressure
Del. quantity	+	hPa : 1500
cm3/1000 strokes	: 23.0 +	Del. quantity
Tolerance	+	cm3/1000 strokes : 298.0
cm3/1000 strokes	: + 3.0 +	Tolerance
Check tolerance	. <u>.</u> †	cm3/1000 strokes : + 1.0
cm3/1000s.	: + 6.0 +	Check tolerance
Spreed	†	cm3/1000s. : +- 4.0
Tolerance	+	Spreed
cm3/1000 strokes	: 5.0 +	Tolerance
Check tolerance	t t	cm3/1000 strokes : 8.0
cm3/100 0 S.	: 8.0	· Check tolerance · cm3/1000s. : 11.0
	I	. (1107 10003 11.0
(B) SETTING OF IN	JECTION PUMP	•
WITH GOVERNOR	+	
	+	CONTROL LEVER
GUIDE SLEEVE TRAV	(F)	· control lever
GOIDE SEEENE IKAN	I	position degree : 64.0
Rated speed rpm	: 1131	tolerance degree : +- 4.0
guide sleeve	I	· · · · · · · · · · · · · · · · · · ·
travel mm	: 8.63	control lever
Tolerance mm	: + 0.15	position degree : 122.0
A THE WITTER THE	1	tolerance degree : +- 4.0
	· ·	

	12.25	Pressure hPa rack travel mm Tolerance mm	: 1500 : 14.00 : + 0.25
Tolerance 1/min :	1120 + 5 4.00	Rated speed rpm Pressure hPa rack travel mm	: 500 : - : 10.00
	1180	Tolerance mm MEASUREMENT	: +- 0.15
Tolerance mm :	0.50 + 0.50 1260	Rated speed rpm	: 500
Rated speed (All .	1200	Pressure hPa rack travel mm Tolerance mm	: 850 : 2.90 : +- 0.20
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 300 : 0.25 : + 0.05
control lever position degree : tolerance degree :		Start interlock	
control lever position degree : tolerance degree :		Rated speed rpm Rated speed rpm	
Setting point w/out	bumper spring	Check speed 1/min Check	: > 80
Rated speed rpm :	225	speed 1/min	: > 250
CRT mm min. :	> 6.00	FUEL DELIVERY CHA	RACTERISTICS
Testing:	<u> </u>		
Rated speed rpm : rack travel mm :	325 3.60 + 0.10	Aneroid pressure hPa Rated speed rpm	: - : 700
Tolerance nm : Rated speed rpm :	+	Del. quantity cm3/1000 strokes	
rated speed (piii .		Tolerance cm3/1000 strokes	
TORQUE CONTROL	700	Check tolerance cm3/1000s.	: +- 4.0
rack travel mm :	13.25 + 0.05	Spreed Tolerance	. 1 4,0
	+	cm3/1000 strokes	: 10.0
rack travel mm :	700 12.55 +- 0.15	Check tolerance cm3/1000s.	: 14.0
ANEROID/ALTITUDE		Aneroid pressure hPa	
COMPENSATOR TEST	-	Rated speed rpm Del. quantity	700
SETTING	1	cm3/1000 strokes Tolerance	: 188.0
OE114110	l l		
Rated speed rpm :	500	cm3/1000 strokes	: +- 1.0

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Pressure hPa rack travel mm Tolerance mm	: 1500 : 14.00 : + 0.25
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.00 : +- 0.15
MEASUREMENT	
Kated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 850 : 2.90 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 300 : 0.25 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : > 230
Check speed 1/min Check	: > 80
speed 1/min	: > 250
FUEL DELIVERY CHA	RACTERISTICS
hPa Rated speed rpm	700
Del. quantity cm3/1000 strokes	: 269.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 10.0
Check tolerance cm3/1000s.	: 14.0
Aneroid pressure	

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

100 Rated speed rpm : rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s.

: +- 19.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 3.60 : **←** 0.10 Tolerance mm Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

: 8.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.08.97 Edition Test oil : ISO 4113

Combination No. : 0 403 486 106

Injection pump

Pump designation : PES6MW100/321RS1232

EP type number : 0 413 496 226

Governor

Governer design. : RSV300...1150MW0A343

: -2

Governer no. : 0 420 085 210

Cust. part No. : 3-7262

Customer-spec. information

Customer : MAN

: D0826LE 523 Motor

Power KW : 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.55

: +- 0.05 Tolerance min

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mn: \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 925

Rack travel in mm: 13.50

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : + 4.0 Spreed	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
opi cea	+ cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	
	CONTROL LEVER
Rated speed rpm : 365	control lever position degree : 103.0 tolerance degree : +- 4.0
Rack travel in mm: 4.50 Tolerance mm: : +- 0.10	T RATED SPEED
Del. quantity	rack travel mm : 12.15
cm3/1000 strokes : 14.0	Rated speed rpm : 1180
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	+ + rack travel mm : 4.00
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1280
Spreed	+ Tolerance 1/min : +- 15
Tolerance	+
cm3/1000 strokes : 3.5	+ rack travel mm : 1.00
Check tolerance cm3/1000s. : 5.5	+ Tolerance mm : +- 0.70 + Pated speed rpm : 1400
cm3./1000s. : 5.5	+ Pated speed rpm : 1400
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 78.0 tolerance degree : +- 4.0
control lever	+
position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 100
Rack travel in mm : 0.65 Tolerance mm : + 0.35	CRT mm min. :> 19.00
governor spring pre-tension	Testing:
click setting x : 5.50	Rated speed rpm : 365
-	† rack travel mm : 4.50
FULL LOAD DELIVERY AT FULL LOAD STOP	- + Tolerance mm : +- U.TU
Rated speed rpm : 925	+ rack travel mm : 2.00 + Rated speed rpm : 420
Aneroid pressure	Tolerance 1/min : + 30
hPa : 1200	+
Del. quantity	
cm3/1000 strokes : 165.0	+ TORQUE CONTROL
Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 925 rack travel mm : 13.50

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 13.15 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.50 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.45 : + 0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 7'50 : 12.35 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 150 : 9.75 : +- 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 1125
cm3/1000 strokes Tolerance	: 163.0
cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000S. Spreed	: ← 5.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 9.0

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 600 : 163.0 : +- 2.0 : +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 76.0 : +- 1.0 : +- 3.0
STARTING FUEL DELI Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100
LOW IDLE	: 365
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 4.50 : +- 0.10 : 14.0

Note remarks

Refer to Service Info for test are adjustment instructions. See microcard(s) W400/...

Edition : 07.08.97 Test oil : ISO 4113

combination No. : 0 401 846 843

Injection pump

Pump designation : PE6P120A720RS3069 EP type number : 0 411 826 712

Governor

Governer design. : RQV300...1000PA501

: -4

Governer no. : 0 421 813 609

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT Motor : 8210.22.371

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.55 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 206.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 9.0	
Rated speed rpm	: 300	
Rack travel in mm Tolerance mm	: 6.20 : ← 0.10	
Del. quantity cm3/1000 strokes	: 20.0	
Tolerance cm3/1900 strokes Check tolerance	: ← 3.0	
cm3/1000s. Spreed	: ← 6.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000s.	: 12.0	
GUIDE SLEEVE TRAVEL		
Rated speed rpm guide sleeve	: 1000	
travel mm Tolerance mm	: 8.10 : ← 0.15	
Rated speed rpm guide sleeve	: 325	
	. 023	
travel mm Tolerance mm	: 1.70 : + 0.20	
travel mm Tolerance mm Rated speed rpm	: 1.70 : +- 0.20	
travel mm Tolerance mm	: 1.70 : +- 0.20	
travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 1.70 : +- 0.20 : 450 : 3.10 : +- 0.20	
Travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1.70 : +- 0.20 : 450 : 3.10 : +- 0.20	
travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: 1.70 : ← 0.20 : 450 : 3.10 : ← 0.20 : 800 : ← 0.20	
travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 1.70 : ← 0.20 : 450 : 3.10 : ← 0.20 : 800 : ← 0.20	

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 206.0 : +- 1.0 : +- 4.0 : 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 120.0 : +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 11.50 : 1045 : +- 5 : +- 10
rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 4.00 : 1145 : +- 15 : +- 20
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1250
LOW IDLE	
control lever position degree tolerance degree	: 67.0 : + 4.0
Setting point w/or	ut bumper spring
Rated speed rpm	: 100
CRT mm min.	: > 7.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.20 : +- 0.10

Rated speed rpm : 1000

Rated speed rpm	: 370	‡
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.55 : + 0.05 : 500 : 12.60 : + 0.10	+++++
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 12.55 : + 0.05	† † †
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.80 : + 0.10	†
MEASUREMENT		‡
Rated speed rpm	: 500	Ţ
Pressure hPa rack travel mm Tolerance mm	: 230 : 10.85 : + 0.15	+
Pressure hPa rack travel mm Tolerance mm	: 280 : 11.85 : + 0.05	† † †
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure hPa Rated speed rpm	: 700 : 500	+ + + + + + + + + + + + + + + + + + + +
Del. quantity cm3/1000 strokes Tolerance		Ī
cm3/1000 strokes Check tolerance cm3/1000S.	: +- 3.0 : +- 6.0	†
Aneroid pressure hPa	: -	† † +

Rated speed rpm : 500	
Del. quantity cm3/1000 strokes : 132.0	
Tolerance cm3/1000 strokes : + 1.0	
Check tolerance cm3/1000s. : +- 4.0	
STARTING FUEL DELIVERY	
Rated speed rpm : 100	
Del. quantity cm3/1000 strokes : 200.0 Tolerance	
cm3/1000 strokes : +- 15.0	
Check tolerance cm3/1000s. : + 19.0	
LOW IDLE	
Rated speed rpm : 300	
Rack travel in mm : 6.20	
Tolerance mm : + 0.10 Del. quantity	
cm3/1000 strokes : 20.0	
Tolerance cm3/1000 strokes : +- 3.0	
cm3/1000 strokes : +- 3.0 Check tolerance	
cm3/1000s. : +- 6.0	
Spreed	
Tolerance cm3/1000 strokes : 8.0	
Check tolerance cm3/1000s. : 12.0	
cm3/1000s. : 12.0	

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... 23.01.96 Edition Test oil : ISO 4113 Combination No. : 0 401 846 8820 Injection pump Pump designation : PE6P120A320RS3206-1 EP type number : 0 411 826 775 Governor Governer design. : RQ750PA783-1 Governer no. : 0 421 801 432 Cust. part No. : 865037 P03 V. 02/95 Customer-spec. information Customer : PENTA : TAMD 122 Motor TEST BENCH REQUIREMENTS Inlet line : 3.1 Vibration damoer (RoBo diaphragm) : 4.2 Test oil inlet temp. °C Tolerance °C : + 2.0 Overflow valve : 1 457 413 010 Inlet press. bar : 1.5 Test nozzle holde : 1 688 901 019 assembly Opening pressure

x inside diameter : 3.0 x length mm : 1000 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 : 3.50 : + 0.05 Prestroke mm Tolerance mm Check tolerance mm : +- 0.10 Rack travel in mm : 10.50 Tolerance mm : + 1.50 Firing order : 1-5-3-6-2-: 4 Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.50 Check tolerance 'NW : +- 0.75 Start of delivery mark Barrel no. : 1 BASIC SETTING Rated speed rpm : 700 Rack travel in mm: 13.80 Tolerance mm: + 0.05Del. quantity cm3/1000 strokes : 345.0 Tolerance cm3/1000 strokes : \leftarrow 1.0

Outside diameter : 8.0

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Check tolerance cm3/1000s.	: +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
CIIIDA 100000 .	. 1 - 4.0	L FOLL COAD DECIVERY AT TOLL COAD STOP
Spreed		Rated speed rpm : 700
0,01000		Aneroid pressure
Tolerance		hPa : -
cm3/1000 strokes	; 5.0	Del. quantity
	,	cm3/1000 strokes : 345.0
Check tolerance		Tolerance
cm3/1000S.	: 9.0	cm3/1000 strokes : +- 1.0
CIID / IGGGG :		Check tolerance
		cm3/1000s. : + 4.0
		Spreed
Rated speed rpm	: 300	Tolerance
	. 300	cm3/1000 strokes : 5.0
Del. quantity cm3/1000 strokes	: 20.0	Check tolerance
	. 20.0	- cm3/1000s. : 9.0
Tolerance cm3/1000 strokes	70	T UM3/10003. : 7.0
	; 	T
Check tolerance		<u>†</u>
cm3/1000s.	: ← 6.0	CONTROL LEVED
Spreed	•	CONTROL LEVER
Tolerance	. 50	†
cm3/1000 strokes		control lever
Check tolerance		position degree : 94.0
cm3/1000s.	: 8.0	tolerance degree : +- 4.0
(D) (D) (D) (D) (D) (D) (D) (D) (D) (D)	NICOTANI CUMA	PATED SPEED
(B) SETTING OF IN	NJECTION PUMP	rack travel mm : 12.80
WITH GOVERNOR		Rated speed rpm : 825
		Tolerance 1/min : +- 3
CUIDE OF EENE TON	/FI	† + rack travel mm : 4.00
GUIDE SLEEVE TRAV	/CL	
	: 759	+ Rated speed rpm : 835 + Tolerance 1/min : +- 15
Rated speed rpm	: 759	T (OLET GILLE IVIIIII) . TO 1)
guide sleeve	: 6.78	† rack travel mm : 0.50
travel mm	: 0.78 : + 0.15	
Tolerance mm	; 0.15	•
والمستعارة المستعارة	. 510	Rated speed rpm : 950
Rated speed rpm	: 510	ACCEMPLY COMEDNOD SETTING
guide sleeve		ASSEMBLY GOVERNOR SETTING
travel mm		† • • • • • • • • • • • • • • • • • • •
Tolerance mm	: + 0.25	Rated speed rpm : 822
	8/0	rack travel mm : 12.80
Rated speed rpm	: 840	†
guide sleeve	4/ 0/	Rated speed rpm : 880
travel mm	: 16.84	Tolerance 1/min : + 5
guide sleeve travel mm Tolerance mm	: + 0.25	rack travel mm : 4.00
		†
Rated speed rpm	: 790	rack travel mm : 0.50
guide sleeve	40.00	Tolerance mm : + 0.50
guide steeve travel mm	: 10.00	Rated speed rpm : 950
Tolerance mm	: +- 0.25	†
	850	†
Rated speed rpm	: 850	Rated speed rpm : 823 rack travel mm : 12.80
guide sl ee ve	44 50	† rack travel mm : 12.80
travel mm	: 11.50	†
Tolerance mm	: 0.50	Rated speed rpm : 881
		Tolerance 1/min : + 5
		rack travel mm : 4.00

rack travel mm Tolerance mm Rated speed rpm	: : +- :	0.50 0.50 950
Rated speed rpm rack travel mm	•	824 12.80
Rated speed rpm Tolerance 1/min rack travel mm	: +-	882 5 4.00
rack travel mm Tolerance mm Rated speed rpm	: : +- :	0.50 0.50 950
Rated speed rpm rack travel mm	:	825 12.80
Rated speed rpm Tolerance 1/min rack travel mm	:	883 5 4.00
rack travel mm Tolerance mm Rated speed rpm	: : +- :	0.50 0.50 950
Rated speed rpm rack travel mm	:	826 12.80
Rated speed rpm Tolerance 1/min rack travel mm		884 5 4.00
rack travel mm Tolerance mm Rated speed rpm	•	0.50 0.50 950
Rated speed rpm rack travel mm	:	827 12.80
Rated speed rpm Tolerance 1/min rack travel mm	: +	885 5 4.00
rack travel mm Tolerance mm Rated speed rpm	: : +-	0.50 0.50 950

TORQUE CONTROL		
Rated speed rpm	:	700
rack travel mm	:	13.80
Tolerance mm	: +	- 0.05

LOW	IDFF

Rated speed rpm Del. quantity	:	300
cm3/1000 strokes	:	20.0
cm3/1000 strokes	: +	- 3.0
Check tolerance cm3/1000s.	: +	- 6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 07.08.97 Test oil : ISO 4113

Combination No. : 0 401 849 760

Injection pump

Pump designation : PE10P120A520/4LS3869

EP type number : 0 411 829 713

Governor

Governer design. : RQV250...900PA1198

Governer no. : 0 421 814 117

Cust. part No. :

Customer-spec. information

Customer : DHI
Motor : D2840LE
Power KW : 340.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 130 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 10-9-4-1-8

: - 7- 6- 3- 5

: - 2

Phasing : 0-45-72-117-144

: -189-216-261-288

: -333

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 10

BASIC SETTING

Rated speed rpm : 650

Rack travel in mm : 11.40 Tolerance mm : +- 0.05	Rated speed rpm : 1240 guide sleeve travel mm : 11.50
Del. quantity cm3/1000 strokes : 196.0	Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : + 4.0	control lever position degree : - 1 Rated speed rpm : 1065
Spreed	Rack travel in mm: 10.40
Tolerance cm3/1000 strokes : 6.0	Tolerance mm : + 1.30
Check tolerance cm3/1000s. : 10.0	FULL LOAD DELIVERY AT FULL LOAD
Note has been been also been the first of the season of the first of the season of the first has been any basis and	Rated speed rpm : 650 Aneroid pressure
Rated speed rpm : 250	hPa : - Del. quantity
Rack travel in mm : 6.90	cm3/1000 strokes : 196.0
Tolerance mm : + 0.10	cm3/1000 strokes : + 1.0 Check tolerance
Del. quantity cm3/1000 strokes : 25.0	+ cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : +- 3.0	Spreed Tolerance
Check tolerance cm3/1000s. : +- 6.0	cm3/1000 strokes : 6.0 Check tolerance
Spreed	cm3/1000s. : 10.0
Tolerance cm3/1000 strokes : 8.0	‡
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
CHS/10005 12.0	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : 63.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	control lever position degree : 118.0 tolerance degree : + 4.0
Rated speed rpm : 969 guide sleeve	+ RATED SPEED
travel mm : 8.42	rack travel mm : 10.40
Tolerance mm : + 0.15	+ Rated speed rpm : 945 + Tolerance 1/min : + 5
Rated speed rpm : 250 guide sleeve	+ rack travel mm : 4.00
travel mm : 1.04 Tolerance mm : + 0.20	Rated speed rpm : 1060 Tolerance 1/min : + 15
Rated speed rpm : 750	rack travel mm : 0.50
guide sleeve travel mm : 6.57	+ Tolerance me : ← 0.50 + Rated speed : 1150
Tolerance mm : +- 0.25	+

STOP

LOW IDLE

control lever

position degree : 68.0 tolerance degree : + 4.0

control lever

position degree : 13.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm %in. : > 8.10

Testing:

Rated speed rpm : 250 rack travel mm : 6.90 Tolerance mm : + 0.10

Rated speed rpm : 330

TORQUE CONTROL

Rated speed rpm : 550 rack travel mm : 11.40 Tolerance mm : + 0.05

Rated speed rpm : 900 rack travel mm : 11.40 Tolerance mm : +- 0.10

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 170

Check

speed 1/min : > 80

Check

speed 1/min : < 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 900

Del. quantity

cm3/1000 strokes : 200.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 310.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 6.90 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 25.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.08.97 Test oil : ISO 4113

Combination No. : 0 402 046 350

Injection pump

Pump designation : PES6P110A720RS531 EP type number : 0 412 016 076

Governor

Governer design. : ROV300...1100PA1016

: -7

: 0 421 813 972 Governer no.

Cust. part No. :

Customer-spec. information : IVECO-UNIC Customer : 8361.25.510 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter: 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

2.05 Prestroke mm : +- 0.50 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.35

: **←** 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 121.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance : +- 3.5 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 4.0	- control lever - position degree : - 1
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1240
	Rack travel in mm : 9.30 Tolerance mm : + 1.30
]	L Toterance mm : += 1.50
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 6.20	L
Tolerance mm : + 0.10	Rated speed rpm : 1100
Del. quantity	- Aneroid pressure
cm3/1000 strokes : 15.5	hPa : 700
Tolerance	Del. quantity
cm3/1000 strokes : +- 2.5	- cm3/1000 strokes : 121.0
Check tolerance	Tolerance
cm3/1000s. : +- 5.0	- cm3/1000 strokes : +- 1.0
Spreed	- Check tolerance
Tolerance	- cm3/1000s. : +- 3.5
cm3/1000 strokes : 4.5	Spreed
Check tolerance	Tolerance
cm3/1000s. : 7.5	- cm3/1000 strokes : 4.0
•	Check tolerance : 7.5
(D) CETTAIC OF TALLECTION CHIND	- cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	L CONTROL CLAER
GOIDE OFFERD WHAFF	control lever
Rated speed rpm : 750	position degree : 121.0
guide sleeve	tolerance degree : + 4.0
travel mm : 4.70	
Tolerance mm : + 0.20	RATED SPEED
	rack travel mm : 9.30
Rated speed rpm : 1145	- Rated speed rpm : 1145
guide sleeve	Tolerance 1/min : +- 5
travel mm : 8.40	Check
Tolerance mm : + 0.10	speed 1/min : +- 10
Rated speed rpm : 300	rack travel mm : 4.00
and do allows	Rated speed rpm : 1220
travel mm : 1.00	Tolerance 1/min : + 15
travel mm : 1.00 - Tolerance mm : + 0.20	Check
-	speed 1/min : + 20
Rated speed rpm : 500	
guide sleeve	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 2.80 - Tolerance mm : + 0.30 -	Tolerance mm : \leftarrow 0.50
Toterance mm : + 0.30	Rated speed rpm : 1350
Rated speed rpm : 1350	rack travel mm : 4.00
autide sleeve	
travel mm : 11.50	-
travel mm : 11.50 - Tolerance mm : + 0.50 -	}
	LOW IDLE
GUIDE SLEEVE POSITION	}

control lever position degree : 67.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 7.70 Testing: Rated speed rpm : 300 6.20 rack travel mm : Tolerance mm : + 0,10 Rated speed rpm : 430 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 10.35 : + 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa 700 rack travel mm : 10.35 Tolerance mm : + 0.05 Rated speed rpm : 500 • Pressure hPa 9.05 rack travel mm : + 0.15Tolerance mm MEASUREMENT Rated speed rpm : 500 430 Pressure hPa 9.50 rack travel mm : ← 0.10 Tolerance mm : 465 : 9.95 Pressure hPa rack travel mm :

: **←** 0.05

Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 97.0 Tolerance cm3/1000 strokes : + 1.0Check tolerance cm3/1000s. : +- 3.5 STARTING FUEL DELIVERY ESS test: With 24 V solenoid activated. rack must reach start position in max. control lever setting. Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance cm3/1000s. : +- 19.0 LOW IDLE Rated speed rpm : 300 Rack travel in mm : 6.20 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 15.5 Tolerance cm3/1000 strokes : +- 2.5 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance 7.5 cm3/1000s.

End of test specification sheet

Tolerance mm

Start interlock

Rated speed rpm : > 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

Combination No. : 0 402 076 801

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

: 0 421 833 553 Governer no.

Cust. part No. : 1382923

Customer-spec, information

Customer : SCANIA

Motor : DSI1172A, -C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration |

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery mark

: **←** 0.10 Tolerance

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	1
Rack travel in mm : 16.75	Rated speed rpm : 700
Tolerance mm : +- 0.05	+ Aneroid pressure + hPa : 1500
Del. quantity	† Del. quantity
cm3/1000 strokes : 263.0	+ cm3/1000 strokes : 263.0 + Tolerance
Tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000 strokes : + 1.0	- Check tolerance - cm3/1000s. : + 4.0
Check tolerance	Spreed
cm3/1000s. : $+$ 4.0	+ Tolerance + cm3/1000 strokes : 8.0
Spreed	Check tolerance
Talanana	- cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	Ţ
Oh vali halamana	CONTROL LEVED
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
NOT THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY A	control lever
	<pre>position degree : 33.0 tolerance degree : + 4.0</pre>
	+
Rack travel in mm : 6.00 Tolerance mm : +- 0.20	+ control lever + position degree : 83.0
Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 20.0	†
Tolerance cm3/1000 strokes : + 4.0	ASSEMBLY GOVERNOR SETTING
Check tolerance	Body desired and 750
cm3/1000s. : +- 6.0 Spreed	+ Rated speed rpm : 750 + rack travel mm : 15.70
Tolerance	+
cm3/1000 strokes : 5.0 Check tolerance	+ Rated speed rpm : 788 + Tolerance 1/min : +- 4
cm3/1000s. : 9.0	rack travel mm : 4.00
	+ rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	† Tolerance mm : + 0.55
WITH GOVERNOR	Rated speed rpm : 850
	-
CITAL CITAL DOCUTION	Rated speed rpm : 751 rack travel mm : 15.70
GUIDE SLEEVE POSITION	+ rack travel mm : 15.70
	Rated speed rpm : 789
control lever position degree : - 3	Tolerance 1/min : +- 4 rack travel mm : 4.00
Rated speed rpm : 800	+
Rack travel in mm : 0.50	rack travel mm : 0.85 Tolerance mm : + 0.55
Tolerance mm : + 0.20	Rated speed rpm : 850
	†
governor spring pre-tension	+ Rated speed rpm : 752
click setting x : 2.00	rack travel mm : 15.70
	+ Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 15.70
Rated speed rpm	: 791
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 15.70
Rated speed rpm Tolerance 1/min rack travel mm	: + 4
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 15.70
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 16.75 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 16.75
Tolerance mm : + 0.05

Rated speed rpm	:	500
Pressure hPa	:	_
rack travel mm	:	13.50
Tolerance mm	:	 0. 20

MEASUREMENT

_	
Rated speed rpm	: 500
Pressure hPa	: 295
rack travel mm	: 14.30
Tolerance mm	: + 0.20
Pressure hPa	: 640
rack travel mm	: 16.00
Tolerance mm	: + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity cm3/1000 strokes	:		188.0
Tolerance cm3/1000 strokes Check tolerance	:	+-	1.0
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	: 100 : 13.50 : + 0.20
Del. quantity cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: +- 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.04.97 Test oil : ISO 4113

Combination No. : 0 402 076 802

Injection pump

Pump designation : PES6P120A1320/5RS337

: 3

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1385930

Customer—spec. information Customer : SCANIA

Motor : DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : ← 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rack travel in mm : 15.35 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 226.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed FULL LOAD DELIVERY AT FULL LOAD S Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 226.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed Folerance cm3/1000 strokes : 8.0	STOP
Del. quantity cm3/1000 strokes : 226.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 226.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed Tolerance cm3/1000 strokes : 8.0	
cm3/1000 strokes : 226.0 hPa : 1500 Del. quantity : cm3/1000 strokes : 226.0 cm3/1000 strokes : 226.0 Tolerance : cm3/1000 strokes : + 1.0 Check tolerance : + 1.0 Check tolerance : cm3/1000s. : + 7.0 cm3/1000s. : + 7.0 Spreed Tolerance : cm3/1000 strokes : 8.0	
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed Cm3/1000 strokes : 226.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 Spreed Folerance cm3/1000 strokes : 8.0	
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 7.0 cm3/1000s. : + 7.0 Spreed Folerance cm3/1000 strokes : 8.0	
cm3/1000s. : + 7.0	
Spreed Folerance cm3/1000 strokes : 8.0	
Talamana Abada Astronomia	
Tolerance + Check tolerance cm3/1000 strokes : 8.0 + cm3/1000s. : 12.0	
Check tolerance	
CONTROL LEVER	
+ control lever	
Rated speed rpm : 350 + position degree : 54.0	
† tolerance degree : +- 4.0	
Rack travel in mm: 5.10 +	
Tolerance mm : + 0.10 + control lever	
Del. quantity + position degree : 104.0	
cm3/1000 strokes : 18.0 + tolerance degree : +- 4.0	
Tolerance +	
cm3/1000 strokes : +- 3.0 + RATED SPEED	
Check tolerance + rack travel mm : 14.30	
Spreed + Tolerance 1/min : + 5	
Tolerarice + Check	
cm3/1000 strokes : 4.0 + speed 1/min : + 10	
Check tolerance	
+ Rated speed rpm : 1195	
+ Tolerance 1/min : + 15	
(B) SETTING OF INJECTION PUMP Check	
WITH GOVERNOR + speed 1/min : + 20	
rack travel mm : 0.85	
+ Tolerance mm : + 0.55	
GUIDE SLEEVE POSITION + Rated speed rpm : 1350	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 control lever position degree : - 3 Rated speed rpm : 355 Rated speed rpm : 1215 Tolerance 1/min : +- 15 Check speed 1/min : +- 20	
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : +- 15 Rated speed rpm : 800 Rack travel in mm : 0.50	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : +- 15 Rated speed rpm : 800 Rack travel in mm : 0.50	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : + 15 Check speed 1/min : + 20 Rack travel in mm : 0.50 Tolerance mm : + 0.20	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 position degree : - 3 Rated speed rpm : 15 Check speed 1/min : + 20 Rack travel in mm : 0.50 Tolerance mm : + 0.20	-
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : + 15 Check speed 1/min : + 20 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 200 Rated speed rpm : 200 Rated speed rpm : 200 Rated speed rpm : 4.00 Rated speed rpm : 4.00 Rated speed rpm : 4.00 Rated speed rpm : 200 Rated speed rpm : 1215 Tolerance 1/min : + 20 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 4.00 Rated speed rpm : 100 Tolerance 1/min : + 20 Rated speed rpm : 100 Tolerance 1/min : + 20 Rated speed rpm : 100 Tolerance 1/min : + 20 Rated speed rpm : 100 Tolerance 1/min : + 20 Rated speed rpm : 100 Tolerance 1/min : + 20 Tolerance mm : + 0.20	
GUIDE SLEEVE POSITION Rated speed rpm : 1350 rack travel mm : 4.00 Rated speed rpm : 1215 position degree : - 3 Rated speed rpm : 15 Check speed 1/min : + 20 Rack travel in mm : 0.50 Tolerance mm : + 0.20	

control lever position degree tolerance degree	: 73.0 : ← 4.0
control lever position degree tolerance degree	: 23.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : ← 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.10 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.35 : ← 0.10
ANEROID/ALTITUDÉ COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.35 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : − : 12.10 : ← 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.10 : ← 0.20

Pressure hPa rack travel mm Tolerance mm	: 780 : 14.50 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 209.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 150.0 : + 1.0 : + 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 0.10

Tolerance

cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.08.97 Test oil : ISO 4113

Combination No. : 0 402 086 702

Injection pump

Pump designation: PES6P100B321RS3388 EP type number : 0 412 006 714

Governor

Governer design. : RSV400...1125PCA674

Governer no. : 0 421 833 592

Cust. part No. : 51.11103-7564

Customer-spec. information

Customer : MAN : DO826 LE531 Motor

: 191.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

: 150 min. L/h : +- 10.0 Tolerance L/h

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 3.30 Prestroke mm : + 0.05 Tolerance mm

Check

: +- 0.10 rolerance mm

Rack travel in mm : 13.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance 'NW : +- 0.75

Start of delivery blocking

: +- 0.10 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rack travel in mm: 14.10	
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
To con direct time	TOLL LOAD DELIVERY AT TOLL LOAD STOT
Del. quantity	Rated speed rpm : 925
cm3/1000 strokes : 174.0	Aneroid pressure
+	hPa : 1500
Tolerance +	Del. quantity
cm3/1000 strokes : \leftarrow 1.0	cm3/1000 strokes : 174.0
+	Tolerance
Check tolerance +	cm3/1000 strokes : +- 1.0
cm3/1000s. : $+$ 4.0 +	Check tolerance
	cm3/1000s. : +- 4.0
Spreed	Spreed
+	Tolerance
Tolerance	cm3/1000 strokes : 4.0
cm3/1000 strokes : 4.0	Check tolerance
The state of the s	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : 6.0 +	
Name and the second sec	CONTROL LEVED
†	CONTROL LEVER
Rated speed rpm : 400	control lever
Rated speed rpm : 400	position degree : 104.0
Rack travel in mm: 4.90	tolerance degree : +- 4.0
Tolerance mm : +- 0.10	toterance degree 4.0
Del. quantity	RATED SPEED
cm3/1000 strokes : 25.0	rack travel mm : 12.60
Tolerance +	Rated speed rpm : 1175
cm3/1000 strokes : + 3.0 +	Tolerance 1/min : + 5
Check tolerance	TOTAL MILES COMMITTEE COMM
cm3/1000s. : +- 6.0	rack travel mm : 4.00
Spreed	Rated speed rpm : 1265
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : 3.5	
Check tolerance +	rack travel mm : 0.85
cm3/1000s. : 5.5 +	Tolerance mm : +- 0.55
+	Rated speed rpm : 1400
+	
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR +	Rated speed rpm : 1270
†	Tolerance 1/min : + 15
†	
CUTAE OF FEUE DOCUTTON	
GUIDE SLEEVE POSITION	
Ť	LOU THE
T	LOW IDLE
control lever	
position degree : -3 + Rated speed rpm : 800 +	control lever
nated speed this . Our	position degree : 80.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : + 0.20	च्चारक व्यवधारक । १८ भ.ए
Total direction O.Co	Setting point w/out bumper spring
governor spring	occerna boune mode pumper spring
pre-tension +	Rated speed rpm : 400
click setting x : 5.00	rack travel mm : 4.40
detail seeding x 1 2.00	Tolerance mm : + 0.10

Testing:

Rated speed rpm	:	400
rack travel mm	:	4.90
Tolerance mm	: +	- 0.10

rack travel mm	:		2.00
Rated speed rpm	:		500
Tolerance 1/min	:	+-	30

TORQUE CONTROL		
Rated speed rpm	:	925
rack travel mm	•	14.10

Rated speed rpm	:	1125
rack travel mm	:	13.60
Tolerance mm	: .	← 0.05

Rated speed rpm	:	1025
rack travel mm	:	13.95
Tolerance mm	• •	← 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	4	500
Pressure hPa	:	1500
rack travel mm	:	14.10
Tolerance mm	:	+ 0.15

Rated speed rpm	:	500
Pressure hPa	:	-
rack travel mm	:	9.70
Tolerance mm	: +	- 0.10

MEASUREMENT

Rated s	peed	rpm	:	500
---------	------	-----	---	-----

Pressure hPa	:	150
rack travel mm	:	10.00
Tolerance mm	: +	- 0.05

Pressure hPa	:	800
rack travel mm	:	13.30
Tolerance mm		- 0 15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	1500
Rated speed rpm	:	1125
Del. quantity		
cm3/1000 strokes	:	161.0
Tolerance		

ioterance		
cm3/1000 strokes	: +-	3.0

	•	
Check tolerance		
cm3/1000s.	: +-	6.0

Aneroid	pressure		
h₽a	•	:	1500

11: Q	•	1000
Rated speed rpm	:	700
Del. quantity		

cms/lubu strokes	107.0
Tolerance	
7/4000 1	7 0

	: +-	3.0
Check tolerance cm3/1000s.	: +	6.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity cm3/1000 strokes	:	91.0
Tolerance		

Tolerance		
cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000s		/. O

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		9.70
Tolerance mm	:	+	0.20
Del. quantity			
cm3/1000 strokes	:		112.0
Tolerance			
cm3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000S.	:	+	14.0

LOW IDLE

Rated	speed	rom	:	400
''a cca	Specu	Polit	•	700

Rack travel in mm	:	4.90
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	:	25.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +-	3.0 6.0
Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	3.5 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12,08,97 : ISO 4113

Combination No. : 0 402 736 889

Injection pump

Pump designation : PES6P120A120RS7390 EP type number : 0 412 726 945

Governor

Governer design. : RQV350...1100PA1244K

Governer no. : 0 421 815 477

Cust. part No. : 3283279

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

90 min. L/h : 90 Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.70 : + 0.10 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

<u>i</u> .	
Rack travel in mm: 13.70	Rated speed rpm : 420
Tolerance mm : +- 0.05	guide sleeve
1 oter and a second	travel mm : 4.28
Del. quantity	Tolerance mm : +- 0.25
cm3/1000 strokes : 173.0	roter arice min O.L.
Clib/ 1000 strokes . 173.0	Rated speed rpm : 1380
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0 +	travel mm : 13.50
cms/ rood strokes: += 1.0	
Charles to Long to the Control of th	Tolerance mm : +- 0.50
Check tolerance + 4.0 +	
$cm3/1000s.$: \leftarrow 4.0	CHINE OF CENE DOCTION
Con a constitution of the	GUIDE SLEEVE POSITION
Spreed	
Talamana T	control forms
Tolerance	control lever
cm3/1000 strokes : 5.0 +	position degree : - 1
	Rated speed rpm : 1195
Check tolerance	0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
cm3/1000s. : 9.0	Rack travel in mm: 12.00
	Tolerance mm : +- 2.00
†	
<u></u> _ +	
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
+	
Rack travel in om: 4.60 +	Rated speed rpm : 1100
Tolerance mm : + 0.10 +	Aneroid pressure
Del. quantity +	hPa : 1500
cm3/1000 strokes : 18.0	Del. quantity
Tolerance	cm3/1000 strokes : 173.0
cm3/1000 strokes : + 3.0 $+$	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : + 5.0	Check tolerance
Spreed	cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : 7.0	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : 11.0	Check tolerance
1	cm3/1000S. : 9.0
1	1 710
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
	COMMON TEACH
GUIDE SLEEVE TRAVEL	control lever
TOTAL DESCRIPTION I	position degree : 68.0
Rated speed rom : 1159	tolerance degree : +- 4.0
The state of the s	toter dilice degree 4.0
guide sleeve + travel mm : 10.27 +	control lever
Tolerance mm : \leftarrow 0.15	
Data d amond and a 750	tolerance degree : +- 4.0
Rated speed rpm : 350	DATEN COUEN
guide sleeve	RATED SPEED
travel mm : 1.93	rack travel mm : 12.70
Tolerance mm : \leftarrow 0.20 \dagger	Rated speed rpm : 1145
	Tolerance 1/min : +- 5
Rated speed rpm : 710	
guide sleeve	rack travel mm : 4.00
travel mm : 5.79	Rated speed rpm : 1240
Tolerance m_1 : +- 0.25	Tolerance 1/min : + 15
·	

Check	
speed 1/min : +- 20 +	Rated speed rpm : 700
+	Pressure hPa : -
rack travel mm : 0.50	rack travel mm : 10.40
Tolerance mm : + 0.50	Tolerance mm : +- 0.20
Rated speed rpm : 1350	
†	MEASUREMENT
†	Dated around man a 700
	Rated speed rpm : 700
LOW IDLE	Pressure hPa : 400
	rack travel mm : 11.70
	Tolerance mm : +- 0.20
control lever	
position degree : 74.0	Pressure hPa : 600
tolerance degree : + 4.0	rack travel mm : 13.30
+	Tolerance mm : +- 0.05
control lever +	
position degree : 20.0	
tolerance degree : + 4.0 +	Start interlock
Coating maint a faut by man agains	Dated aread area at 100
Setting point w/out bumper spring +	Rated speed rpm :> 100 Rated speed rpm :< 290
Rated speed rpm : 250	Rated Speed Phil . \ 270
Nated Speed (pill) 250	Check
CRT mm min. : > 7.50	speed 1/min :> 80
	Check
Testing:	speed 1/min : < 300
+	·
Rated speed rpm : 350 +	
rack travel mm : 4.60	FUEL DELIVERY CHARACTERISTICS
Tolerance mm : + 0.10 +	
0ated aread are 1 750	Anancid
Rated speed rpm : 350	Aneroid pressure hPa : 1500
	Rated speed rpm : 700
TORQUE CONTROL	Del. quantity
Rated speed rpm : 1100	cm3/1000 strokes : 171.0
rack travel mm : 13.70	Tolerance
Tolerance mm : + 0.05	cm3/1000 strokes : +- 3.0
+	Check tolerance
Rated speed rpm : 700	cm3/1000s. : +- 6.0
rack travel mm : 13.85	Canad
- 4	Spreed
Tolerance mm : + 0.10	Tolerance
	Tolerance cm3/1000 strokes : 8.0
Rated speed rpm : 500	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 500 rack travel mm : 12.95	Tolerance cm3/1000 strokes : 8.0
Rated speed rpm : 500	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 500 rack travel mm : 12.95	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Rated speed rpm : 500 rack travel mm : 12.95	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : + 2.0
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : + 2.0
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500 rack travel mm : 13.85	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		20.50
Tolerance mm	:	+	0.50
Del. quantity			
cm3/1000 strokes	:		190.0
Tolerance			
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000s.	•	+-	24.0

LOW IDLE

Rated speed rpm	:	350	
Rack travel in mm Tolerance mm Del. quantity	: +-	4.60 0.10	
cm3/1000 strokes Tolerance	:	18.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s. Spreed	: +-	5.0	
Tolerance cm3/1000 strokes	:	7.0	
Check tolerance cm3/1000s.	:	11.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.08.97 Test oil : ISO 4113

Combination No. : 0 402 846 060

Injection pump

Pump designation : PE6P12OA32ORS8015 EP type number : 0 412 826 016

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031819

: -P03 V. 2.95

Customer-spec. information

Customer : VCE

Motor : TD122KFE-P5880

Power KW : 296.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance $: \leftarrow 0.50$

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

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		† Tolerance mm	: +- 0.20
BASIC SETTING		Rated speed rpm	: 1035
5	700	+ guide sleeve	/ OO
Rated speed rpm	: 700	travel mm	: 6.98
		Tolerance mm	: +- 0.25
Rack travel in mm	: 11.30	Rated speed rpm	: 490
Tolerance mm	: ← 0.05	<pre>guide sleeve</pre>	
		+ travel mm	: 4.65
Del. quantity		† Tolerance mm	: 0.25
cm3/1000 strokes	: 298.0	+	
		+ Rated speed rpm	: 1300
Tolerance		+ guide sleeve	44.55
cm3/1000 strokes	: ← 1.0	+ travel mm	: 11.50
		+ Tolerance mm	: ← 0.50
Check tolerance		†	
cm3/1000s.	: ← 4.0	CHARL OF STATE SOCI	TTON:
Canad		GUIDE SLEEVE POST	LITON
Spreed		Ī	
Tolerance		T control lever	
cm3/1000 strokes	: 8.0	position degree	1
CIDY 1000 SCHOKES	. 6.0	Rated speed rpm	
Check tolerance		+ Rated Speed rpm	: 1190
cm3/1000s.	: 11.0	Rack travel in m	. 0.50
CMD2 (1000)5.	: 71,0	Tolerance mm	
			1.50
		I -	
Rated speed rpm	: 325	FULL LOAD DELIVER	RY AT FULL LOAD STOP
		+	
Rack travel in ma	: 3.80	Rated speed rpm	: 700
Tolerance mm		+ Aneroid pressure	
Del. quantity	•	hPa	: 1500
cm3/1000 strokes	: 23.0	+ Del. quantity	
Tolerance		+ cm3/1000 strokes	: 298.0
cm3/1000 strokes	: - 3.0	Tolerance	
Check tolerance		+ cm3/1000 strokes	: +- 1.0
	: ← 6.0	+ Check tolerance	
Spreed		+ cm3/1000s.	: +- 4.0
Tolerance		Spreed	
cm3/1000 strokes	• 50	Tolerance	
Check tolerance		cm3/1000 strokes	• 2.0
cm3/1000s.	: 8.0	+ Check tolerance	
	. 6.0	cm3/1000s.	
		T (1107 10003.	. 11.0
(B) SETTING OF IN	JECTION PUMP	1	
WITH GOVERNOR			
		+ CONTROL LEVER	
		+	
GUIDE SLEEVE TRAV	EL	+ control lever	
		+ position degree	
Rated speed rpm	: 1121	+ tolerance degree	
guide sleeve		+	
travel mm	: 8.44	+ control lever	
Tolerance mm		<pre>position degree</pre>	: 122.0
		+ tolerance degree	
Rated speed rpm	: 325	+	
guide sleeve		+ RATED SPEED	
travel mm	: 2.04	rack travel mm	: 10.30
	-	•	

Rated speed rpm Tolerance 1/min	: 1110 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1160 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 64.0 : +- 4.0
control lever position degree tolerance degree	: 12.0 : +- 4.0
Setting point w/o	ut bumper sprina
Rated speed rpm	: 225
CRT mam min.	: > 5.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.80 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.45 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.25 : + 0.25

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 7.80 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 850 : 3.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 300 : 0.25 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : > 230
Check speed 1/min Check	: > 80
speed 1/min	: > 250
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: -
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - : 700
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 700
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 700 : 269.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: - : 700 : 269.0 : +- 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: - : 700 : 269.0 : + 1.0 : + 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: - : 700 : 269.0 : + 1.0 : + 4.0 : 10.0

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 150.0
Tolerance	
cm3/1000 strokes	: ← 15.0
Check tolerance	
cm3/1000s.	: +- 19.0

LOW IDLE

Rated speed rpm	:	325
Rack travel in mm Tolerance mm	: +-	3.80 0.10
Del. quantity cm3/1000 strokes Tolerance	:	23.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes	:	5.0
Check tolerance cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 07.98.97 Edition Test oil : ISO 4113

Combination No. : 0 402 846 067

Injection pump

Pump designation : PE6P120A320RS8015 : 0 412 826 **0**16 EP type number

Governor

Governer design. : RQV300...1050PA1225

Soverner no. : 0 421 814 151

Cust. part No. : 11031773

: -P03 v.05/96

Customer-spec. information

Customer : VCE

: TD122KAE Motor Power KW : 243.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 138
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 4.00 : +- 0.05 Tolerance mm

Check

tolerance mm : ← 0.10

Rack travel in mm: 11.00 : **←** 0.50 Tolerance mm

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

: **←** 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

700 Rated speed rpm :

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Rack travel in mm: 9.30	Rated speed rpm : 490
Toterance mm : + 0.05	guide sleeve
	travel mm : 4.65
Del. quantity	Tolerance mm : + 0.25
cm3/1000 strokes : 236.0	Dated aread area a 1200
Tolerance	Rated speed rpm : 1300 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 11.50
	Tolerance mm : + 0.50
Check tolerance +	
cm3/1000s. : + 4.0	
Charles and	GUIDE SLEEVE POSITION
Spreed	
Tolerance	control lever
cm3/1000 strokes : 8.0	position degree : - 1
	Rated speed rpm : 1190
Check tolerance + cm3/1000s. : 11.0 +	Do to Americal Sin and a 0 50
cm3/1000s. : 11.0	Rack travel in mm : 9.50 Tolerance mm : + 1.30
	forerance min . 1.50
+	
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Problems 2 00	Rated speed rpm : 700
Rack travel in mm: 3.80 + Tolerance mm: ÷ 0.10 +	Rated speed rpm : 700 Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 23.0	Del. quantity
Tolerance	cm3/1000 strokes : 236.0
cm3/1000 strokes : + 3.0	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0	Check tolerance cm3/1000s. : + 4.0
Spreed +	cm3/1000S. : + 4.0 Spreed
cm3/1000 strokes : 5.0	Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance
+	cm3/1000s. : 11.0
(D) CETETALS DE TALLECTION DIMO	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rom : 1131	position degree : 61.0 tolerance degree : +- 4.0
Rated speed rpm : 1131 + guide sleeve +	toterance degree . 4.0
travel mm : 8.61	control lever
Tolerance mm : + 0.15	position degree : 122.0
+	tolerance degree : +- 4.0
Rated speed rpm : 325	DATE COPED
guide sleeve + travel mm : 2.04 +	RATED SPEED rack travel mm : 8.30
travel mm : 2.04 + Tolerance mm : + 0.20 +	rack travel mm : 8.30 Rated speed rpm : 1120
Total mile mile	Tolerance 1/min : +- 5
Rated speed rpm : 1038	
guide steeve	rack travel mm : 4.00
travel mm : 7.03	Rated speed rpm : 1170
Tolerance mm : + 0.25	Tolerance 1/min : + 15

rack travel mm Tolerance mm Rated speed rpm	0.70
LOW IDLE	
control lever position degree tolerance degree	: 64.0 : + 4.0
control lever position degree tolerance degree	: 10.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 5.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.80 : +- 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 9.30 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 9.30 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 7.80 : + 0.10

Pressure hPa rack travel mm Tolerance mm	: 520 : 1.30 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 290 : 0.25 : ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	•
Rated speed rpm	700
Del. quantity cm3/1000 strokes	: 188.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance	: += 1.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.50 : + 0.50 : 150.0
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mo Tolerance mom Del. quantity	: +- 0.10
cm3/1000 strokes Tolerance	: 23.0
cm3/1000 strokes Check tolerance	: 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance	
cm3/1000s.	: 8.0

MEASUREMENT

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.08.97 : ISO 4113

Combination No. : 0 402 846 082

Injection pump

Pump designation : PE6P12OA32ORS8051 EP type number : 0 412 826 037

Governor

Governer design. : RQV300...1050PA1225

Governer no. : 0 421 814 151

Cust. part No. : 11127056

: -P02 v.08/97

Customer-spec. information

Customer : VCE

Motor

: TD122KME

: 245.C Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C

Tolerance °C

Overflow valve : 2 417 413 078

2.5 Inlet press. bar :

: + 0.1 Tolerance bar

Tolerance l/h: + 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

2.0 x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

4.50 Prestroke mm

: + 0.05 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm : 11.00

Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

: + 0.75 tolerance *NW

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance NW : **←** 0.75

: 1 Barrel no.

BASIC SETTING

1	1
Rack travel in mm: 12.10	Rated speed rpm : 490
Tolerance mm : +- 0.05	guide sleeve
	travel mm : 4.65
Del. quantity	Tolerance mm : +- 0.25
cm3/1000 strokes : 258.0	
	Rated speed rpm : 1300
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 11.50
CIRPY TOOD SET ONES . T 1.0	Tolerance mm : +- 0.50
Check tolerance	roterance min . += 0.30
cm3/1000s. : +- 4.0	
cm5/10005, : — 4.0	CHINE OF ECHE DOCTION
	GUIDE SLEEVE POSITION
Spreed	
Tolerance	control lever
cm3/1000 strokes : 8.0	position degree : - 1
	Rated speed rpm : 1190
Check tolerance	
cm3/1000s. : 11.0	Reck trevel in mm: 8.30
	Tolerance mm : +- 1.30
•	
-	
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
-	
Rack travel in mm: 3.60 -	Rated speed rpm : 700
Tolerance mm : + 0.10 -	Aneroid pressure
Del. quantity -	hPa : 1500
cm3/1000 strokes : 23.0 -	Del. quantity
Tolerance -	cm3/1000 strokes : 258.0
cm3/1000 strokes : + 3.0	Tolerance
Check tolerance -	cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0	Check tolerance
Spreed -	cm3/1000s. : +- 4.0
Tolerance -	Spreed
cm3/1000 strokes : 5.0 -	Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance
cm3710005. : 0.0 -	
•	cm3/1000s. : 11.0
(a) contine of intertion of the	
(B) SETTING OF INJECTION PUMP -	
WITH GOVERNOR -	CONTROL LEVER
	CONTROL LEVER
CUTAE CLEDIE TOAUEL	control love-
GUIDE SLEEVE TRAVEL -	control lever
- 0-4	position degree : 63.0
Rated speed rpm : 1131	tolerance degree : +- 4.0
guide sleeve -	The second second
travel mm : 8.61	control lever
Tolerance mm : + 0.15	position degree : 117.0
-	tolerance degree : +- 4.0
Rated speed rpm : 325	†
guide sleeve	RATED SPEED
travel mm : 2.04	rack travel mm : 11.10
Tolerance mm : + 0.20	Rated speed rpm : 1120
	Tolerance 1/min : +- 5
Rated speed rpm : 1038 -	+
guide sleeve	rack travel mm : 4.00
travel mm : 7.03	Rated speed rpm : 1180
Tolerance mm : + 0.25	Tolerance 1/min : + 15
	•

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 65.0 : + 4.0
control lever position degree tolerance degree	: 11.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.60 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.10 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mma	: 500 : 1500 : 12.10 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.00 : + 0.20
MEASUREMENT	

Pressure hPa : 290 rack travel mm : 0.25 Tolerance mm : + 0.05	Pressure hPa rack travel mm Tolerance mm	: 640 : 1.60 : + 0.20
	rack travel mm	: 0.25

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		700
Del. quantity			
cm3/1000 strokes	:		188.0
Tolerance			
cm3/1000 strokes	:	+	1.0
Check tolerance			
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		20.50
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		155.0
Tolerance			
cm3/1000 strokes	:	+	15.0
Check tolerance			
cm3/1000S.	:	+-	19.0

LOW IDLE

Rated speed rpm	:		325
Rack travel in mm Tolerance mm Del. quantity	:	+-	3.60 0.10
cm3/1000 strokes	:		23.0
Tolerance cm3/1000 strokes	:	+	3.0
Check tolerance cm3/1000S.	:	+	6.0
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 148

Injection pump

Pump designation : PES6MW100/720RS1131 EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MWOA405

Governer no. : 0 420 085 294

Cust. part No. : 0270741802

Customer-spec. information : MB-NFZ Customer : OM 366 A Motor Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

3.75 Prestroke mm : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm: 11.65 Tolerance mn: +- 0.05

Del. quantity

cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 107.0 tolerance degree : + 4.0
Rack travel in mm: 6.30	+
Tolerance mm : + 0.25	+ RATED SPEED + rack travel mm : 10.65
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1233
Tolerance 3.0	Tolerance 1/min : + 3
cm3/1000 strokes : + 2.0 Check tolerance	t rack travel mm : 4.00
cm3/1000s. : + 4.5	Rated speed rpm : 1290
Spreed	Tolerance 1/min : + 5
Tolerance	1.00
cm3/1000 strokes : 3.5 Check tolerance	rack travel num : 1.00 Tolerance num : + 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1400
	+
(E) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	†
GUIDE SLEEVE POSITION	control lever position degree : 81.0 tolerance degree : + 4.0
control lever position degree : - 3	† Setting point w/out bumper spring
Rated speed rpm : 800	+
	Rated speed rpm : 100
Rack travel in mm: 0.65 Tolerance mm: + 0.35	+ CRT mm min. : > 19.00
roter arte min	
governor spring	Testing:
pre-tension click setting x : 5.25	Rated speed rpm : 350
Click Setting x . S.Es	rack travel mm : 6.30
	rack travel mm : 6.30 Tolerance mm : + 0.25
FULL LOAD DELIVERY AT FULL LOAD STOP	2.00
Rated speed rpm : 1180	rack travel mm : 2.00 Rated speed rpm : 450
Aneroid pressure	Tolerance 1/min : +- 30
hPa : 800	+
Del. quantity	TODOUS CONTROL
cm3/1000 strokes : 89.0 Tolerance	TORQUE CONTROL Rated speed rpm : 1180
cm3/1000 strokes : + 1.0	rack travel mm : 11.65
Check tolerance	Tolerance mm : +- 0.05
$cm3/1000s.$: \leftarrow 3.0	+
Spreed	Rated speed rpm : 800
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 12.00 Tolerance mm : +- 0.10
	+

Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mmn	: 500 : 800 : 12.00 : + 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 500 : - : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 1.10 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 275 : 0.65 : ← 0.10
rack travel mm	: 0.65 : ← 0.10
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: 0.65 : ← 0.10
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 0.65 : ← 0.10 RACTERISTICS : 800
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0 : + 1.5
rack travel mm Tolerance mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0 : + 1.5 : + 4.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0 : + 1.5 : + 4.0 : 5.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0 : + 1.5 : + 4.0 : 5.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 0.65 : ← 0.10 RACTERISTICS : 800 : 800 : 88.0 : + 1.5 : + 4.0 : 5.0 : 7.0

Check tolerance : +- 3.0 cm3/1000s. STARTING FUEL DELIVERY Check hydraulic start locking and unlocking device with 500...1000 hPa. Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000s. : +-8.0 LOW IDLE Rated speed rpm : 350 Rack travel in mm: 6.30 Tolerance mm : \leftarrow 0.25 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance

End of test specification sheet

3.5

: 5.5

cm3/1000 strokes :

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.08.97 Test oil : ISO 4113

Combination No. : 0 403 476 151

Injection pump

Pump designation: PES6MW100/720RS1131

EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A405

Governer no. : 0 420 085 294

Cust. part No. : 0270742302

Customer-spec. information Customer : MB-NFZ Motor : OM 366 A Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : ← 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm : 11.65 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance	Check tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 107.0 tolerance degree : +- 4.0
Rack travel in mm: 6.30 Tolerance mm: + 0.25 Del. quantity cm3/1000 strokes: 12.0	RATED SPEED rack travel mm : 10.65 Rated speed rpm : 1233
Tolerance + cm3/1000 strokes : + 2.0 +	Tolerance 1/min : +- 3
Check tolerance cm3/1000s. : +- 4.5 +- Spreed	rack travel mm : 4.00 Rated speed rpm : 1290 Tolerance 1/min : +- 5
Tolerance + cm3/1900 strokes : 3.5 + check tolerance + cm3/1000s. : 5.5 + cm3/1000s.	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 81.0 tolerance degree : +- 4.0</pre>
control lever position degree : -3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.65	Rated speed rpm : 100
Tolerance mm : ← 0.35	CRT mm min. : > 19.00
governor spring pre-tension +	Testing:
click setting x : 5.25	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00
Rated speed rpm : 1180 + Aneroid pressure + 800 +	Rated speed rpm : 450 Tolerance 1/min : +- 30
Del. quantity cm3/1000 strokes : 89.0	TORQUE CONTROL
Tolerance + cm3/1000 strokes : + 1.0 + Check tolerance +	Rated speed rpm : 1180 rack travel mm : 11.65 Tolerance mm : +- 0.05
cm3/1000s. : + 3.0 + 5preed	Rated speed rpm : 800
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 12.00 Tolerance mm : +- 0.10

Rated speed rpm	:	1100
rack travel mm	:	11.75
Tolerance mm	:	← 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	800
rack travel mm	:	12.00
Tolerance mm	: -	-0.10

Rated speed rpm	:	500
Pressure hPa	:	***
Tolerance mm	:	← 0.10

MEASUREMENT

Rated speed rpm	:	500
Pressure hPa rack travel mm Tolerance mm	:	350 1.10 - 0.10

Pressure hPa	:	275
rack travel mm	:	0.65
Tolerance mm	: +	- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm	:		800 800
Del. quantity	•		900
cm3/1000 strokes	:		88.0
Tolerance			
cm3/1000 strokes	:	+	1.5
Check tolerance			
cm3/1000s.	:	+-	4.0
Spreed			
Tolerance			
cm3/1000 strokes	:		5.0
Check tolerance			
cm3/1000s.	:		7.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	50.0
Tolerance		
cm3/1000 strokes	: +	- 1.0

Check tolerance		
cm3/1000s.	: +-	3.0

STARTING FUEL DELIVERY

Check hydraulic start locking and unlocking device with 500...1000 hPa.

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	83.0
Tolerance cm3/1000 strokes	: ÷	- 5.0
Check tolerance cm3/1000s.	: +	- 8.0

LOW IDLE

Rated speed rpm	:	350
Rack travel in mm Tolerance mm Del. quantity	: +-	6.30 0.25
	:	12.0
cm3/1000 strokes Check tolerance	: -	2.0
cm3/1000s. Spreed	: +-	4.5
Tolerance cm3/1000 strokes Check tolerance	:	3.5
cm3/1800s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 736 907

Injection pump

Pump designation : PES6P12DA12ORS7432 EP type number : 0 412 726 967

Governor

Governer design. : RQV450...1100PA1334K

Governer no. : 0 421 815 549

Cust. part No. : 3931940

Customer-spec. information Customer : CDC : 6CTA-A Motor Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + U.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.40 : **←** 0.03 Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.25

Tolerance mm : +- 0.05

ı	- guide sleeve
Del. quantity	- travel mm : 13.50
cm3/1000 strokes : 227.0	Tolerance mm : + 0.50
-	
Tolerance	FIRE LOAD DELTHERY AT FIRE LOAD GTOD
cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	Rated speed rpm : 1100
cm3/1000s. : +- 4.0	Aneroid pressure
	hPa : 900
Spreed -	Del. quantity
Talayana	cm3/1000 strokes : 227.0
Tolerance cm3/1000 strokes : 5.0	Tolerance : +- 1.0
ciid/ 1000 st/ okes . J.o	Check tolerance
Check tolerance	- cm3/1000s. : + 4.0
cm3/1000s. : 9.0	Spreed
	Tolerance
7	cm3/1000 strokes : 5.0
Rated speed rpm : 450	Check tolerance : 9.0
naced speed (piii . 450	. 7.0
Rack travel in mm: 6.40	1
Tolerance mm : + 0.20	
Del. quantity	CONTROL LEVER
cm3/1000 strokes : 31.0 -	t control lever
cm3/1000 strokes : +- 3.0	position degree : 117.0
Check tolerance	tolerance degree : + 4.0
cm3/1000s. : + 5.0	
Spread	RATED SPEED
Tolerance	rack travel mm : 13.20
cm3/1000 strokes : 8.0 - Check tolerance	Rated speed rpm : 1170 Tolerance 1/min : +- 15
cm3/1000s. : 12.0	Toterance min . 1
	rack travel mm : 8.00
-	Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 5
WITH GOVERNOR	t rack travel mm : 0.50
	Tolerance mm : + 0.50
GUIDE SLEEVE TRAVEL	Rated speed rpm : 1350
Rated speed rpm : 1162 -	}
guide sleeve	
travel mm : 7.49 - Tolerance mm : + 0.15 -	LOW IDLE
To cer an ice light	LOW IDEE
Rated speed rpm : 450	1
guide sleeve	control lever
travel mm : 1.33	position degree : 76.5
Tolerance mm : \leftarrow 0.20	tolerance degree : + 4.0
Rated speed rpm : 860	Control lever difference
guide sleeve	Grad : 40.5
travel mm : 4.55	tolerance degree : +- 6.0
Tolerance mm : + 0.25	t
Potent aread many a 4540	Setting point w/out bumper spring
Rated speed rpm : 1560	Rated speed rpm : 375
	F Nateu Speed (pill . 3/3

		+ Check
CRT mm min.	: > 7.70	speed 1/min : < 400
Testing:		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 450	
rack travel mm Tolerance mm	: 6.40	
Tolerance mm	: +- 0.20	Aneroid pressure
		+ hPa : 900
Rated speed rpm	: 525	+ Rated speed rpm : 750
•		+ Del. quantity
	·	
TORQUE CONTROL		Tolerance
Rated speed rpm	: 1100	+ cm3/1000 strokes : $+$ 3.0
rack travel mm	: 14.25	+ Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: ← 0.05	+ cm3/1000s. : +- 6.0
		+ Spreed
Rated speed rpm	: 750	+ Tolerance
rack travel mm Tolerance mm	: 13.55	+ cm3/1000 strokes : 8.0
Toterance mm	: +- C.10	+ Check tolerance
		cm3/1000s. : 12.0
Rated speed rpm	: 500	+
rack travel mm	: 13.60	
Tolerance mm		+ Aneroid pressur:
		+ hPa : -
		Rated speed rpm : 1000
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 183.5
		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
SETTING		- Check tolerance
		+ cm3/1000s. : +- 3.0
Rated speed rpm	: 1100	†
Pressure hPa	: 900	†
	4000	OTANTANO SUSI ASI TUSOV
Reted speed rpm		+ STARTING FUEL DELIVERY
Pressure hPa	- 42.00	100
rack travel mm	: 12.80	+ Rated speed rpm : 100
Tolerance mm	: ← 0.20	rack travel mm : 21.00
MEAGLINEMENT		+ Tolerance mm : + 0.50
MEASUREMENT		+ Del. quantity + cm3/1000 strokes : 156.0
Dated speed som	: 1100	+ Tolerance
Rated speed rpm	. 1100	- cm3/1000 strokes : +- 20.0
Pressure hPa	: 400	Check tolerance
rack travel mm	: 13.80	+ cm3/1000s. : + 25.0
Tolerance mm	: ← 0.20	1 23.0
LOCAL MILE IN	0.20	\mathbf{I}
Pressure hPa	: 300	1
rack travel mm		
Tolerance mm		+ LOW IDLE
rocci di loc ilin		1 2011 2022
	····	
Start interlock		
		Rack travel in mm: 6.40
Rated speed rpm	: > 100	+ Tolerance mm : +- 0.20
Rated speed rpm		+ Del. quantity
		+ cm3/1000 strokes : 31.0
Check		+ Tolerance
speed 1/min	: > 80	+ cm3/1000 strokes : +- 3.0
- +		,

M14

Check tolerance : +- 5.0 Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s.

12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 15.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 911

Injection pump

Pump designation : PES6P12OA12ORS7370 EP type number : 0 412 726 934

Governor

Governor design. : RQV400...1250PA1212

: -2K

Governer no. : 0 421 815 528

Cust. part No. : 3931537

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.50
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.85

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 170.0	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
		Rated speed rpm : 1250
Check tolerance cm3/1000s.	: +- 4.0	Aneroid pressure hPa : 1200
Spreed		+ Del. quantity + cm3/1000 strokes : 170.0
		Tolerance
Tolerance cm3/1000 strokes	: 8.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Obselve a Levens		+ cm3/1000s. : +- 4.0
Check tolerance cm3/1000s.	: 13.0	+ Spreed + Tolerance
		cm3/1000 strokes : 8.0
		Check tolerance
Rated speed rpm	: 460	t cm3/1000s. : 13.0
Harek Speck Chil	, 100	<u> </u>
Rack travel in m	_	
Tolerance mm	: - 0.20	+ CONTROL LEVER
Del. quantity cm3/1000 strokes	: 13.5	control lever
Tolerance	. ,3.3	position degree : 114.0
cm3/1000 strokes	: +- 3.0	tolerance degree : + 6.0
Check tolerance		1 24752 00552
cm3/1000S.	: + 5.0	+ RATED SPEED + rack travel mm : 12.80
Spreed Tolerance		Rated speed rpm : 1320
cm3/1000 strokes	: 3.0	Tolerance 1/min : + 25
Check tolerance		†
cm3/1000s.	: 5.0	+ rack travel mm : 4.00
		+ Rated speed rpm : 1580 + Tolerance 1/min : +- 5
(B) SETTING OF IN	VUECTION PUMP	Tocal and Trimiti
WITH GOVERNOR	- Carrier - Carrier	rack travel mm : 0.50
		Tolerance mm : + 0.50
GUIDE SLEEVE TRAN	/EL	Rated speed rpm : 1700
		†
Rated speed rpm	: 1412	İ
guide sleeve travel mm	: 9.88	LOW IDLE
Tolerance mm	: + 0.15	+
	. /20	†
Rated speed rpm	: 420	+ control lever + position degree : 63.5
guide sleeve travel mm	: 1.56	tolerance degree : + 6.0
Tolerance mm	: + 0.20	+
		Control lever difference
Rated speed rpm	: 1020	Grad : 50.5
guide sleeve travel mm	: 5.97	tolerance degree : + 6.0
Tolerance mm	: 5.97 : +- 0.25	Setting point w/out bumper spring
. 3 50 . 41.100		+
Rated speed rpm guide sleeve	: 2000	Rated speed rpm : 300
travel mm	: 13.50	† CRT mm min. :> 7.20

Testing:

Rated speed rpm 460 rack travel mm 5.40 : +- 0.20 Tolerance mm

Rated speed rpm : 425

TORQUE CONTROL

Rated speed rpm : 1250 13.85 rack travel mm : +- 0.05 Tolerance mm

800 Rated speed rpm 11.80 rack travel mm Tolerance mm : **←** 0.10

1000 Rated speed rpm 12.50 rack travel mm Tolerance mm : **←** 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1250 Pressure hPa : 1200

1250 Rated speed rpm Pressure hPa 9.40 rack travel mm : +- 0.20 Tolerance mm

MEASUREMENT

: 1250 Rated speed rpm

440 Pressure hPa : 12.55 rack travel mm : + 0.30Tolerance mm

265 Pressure hPa 10.80 rack travel mm : + 0.20 Tolerance mm

Start interlock

100 Rated speed rpm :> 315 Rated speed rpm : <

Check

speed 1/min 80 : >

Check

325 speed 1/min : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 1200 Rated speed rpm 800

Del. quantity

cm3/1000 strokes : 123.5

Tolerance

cm3/1000 strokes : +- 3.0Check tolerance

: +-

6.0

cm3/1600s.Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 13.0

Aneroid pressure

hPa 1250 Rated speed rpm

Del. quantity cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm 100 11.70 rack travel mm : Tolerance mm : **←** 0.50 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 460

5,40 Rack travel in mm : : **←** 0.20 Tolerance mm

Del. quantity

cm3/1000 strokes : 13.5 Tolerance

cm3/1000 strokes : +- 3.0Check tolerance 5.0

cm3/1000s. : +-

Spreed
Tolerance
cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 15.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 736 912

Injection pump

Pump designation : PES6P120A120RS7370 EP type number : 0 412 726 934

Governor

Governer design. : RQV400...1250PA1212

: -3K

: 0 421 815 529 Governer no.

Cust. part No. : 3931539

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 134.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x Length mm : 600

RFMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5- 3- 6- 2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.85

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 170.0	Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	; + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Charl dalanaman		- Rated speed rpm : 1250
Check tolerance cm3/1000s.	: +- 4.0	- Aneroid pressure - hPa : 1200
Spreed		- Del. quantity - cm3/1000 strokes : 170.6
Tolerance cm3/1000 strokes	: 8.0	- Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance
Check tolerance		- cm3/1000s. : +- 4.0 - Spreed
cm3/1000s.	: 13.0	- Tolerance - cm3/1000 strokes : 8.0
		- Check tolerance - cm3/1009s. : 13.0
Rated speed rpm	: 460	
Rack travel in m		
Tolerance mm Del. quantity	: +- 0.20	CONTROL LEVER
cm3/1000 strokes Tolerance	: 13.5	control lever position degree : 114.0
cm3/1000 strokes Check tolerance	: +- 3.0	tolerance degree : +- 6.0
cm3/1000s. Spreed	: +- 5.0	- RATED SPEED - rack travel mm : 12.80
Tolerance		- Rated speed rpm : 1320
cm3/1000 strokes Check tolerance	: 3.0	Tolerance 1/min : + 25
cm3/1000s.	: 5.0	rack travel mm : 4.00 Rated speed rpm : 1580 Tolerance 1/min : +- 5
(B) SETTING OF IN	NJECTION PUMP	
WITH GOVERNOR		rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1700
GUIDE SLEEVE TRAV	/EL	Nated Speed 1 pm
Rated speed rpm guide sleeve	: 1412	
travel mm	: 9.88	LOW IDLE
Tolerance mm	: + 0.15	
Rated speed rpm guide sleeve	: 420	control lever position degree : 62.5
travel mm	: 1.56	tolerance degree : +- 6.0
Tolerance mm	: +- 0.20	- Control lever difference
Rated speed rpm	: 1020	Grad : 51.5
guide sleeve	-	tolerance degree : +- 6.0
travel mm	: 5.97	Carrent burners and a
Tolerance mm	: ← 0.25	Setting point w/out bumper spring
Rated speed rpm guide sleeve	: 2000	Rated speed rpm : 300
travel mm	: 13.50	- CRT mm min. : > 7.20

Testing:

Rated speed rpm : 460 rack travel mm : 5.40 : +- 0.20 Tolerance mm

Rated speed rpm : 425

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 13.85 : +- 0.05 Tolerance mm

: 800 : 11.80 Rated speed rpm rack travel mm : **←** 0.10 Tolerance mm

Rated speed rpm : 1000 rack travel mm : 12.50 : **←** 0.20 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1250 : 1200 Pressure hPa

Rated speed rpm : 1250 Pressure hPa 9.10 rack travel mm Tolerance mm : +- 0.20

MEASUREMENT

: 1250 Rated speed rpm

440 Pressure hPa rack travel mm 11.70 : +- 0.30 Tolerance mm

: 265 : 10.00 Pressure hPa rack travel mm Tolerance mm : + 0.20

Start interlock

100 Rated speed rpm :> Rated speed rpm : < 315

Check

: > 80 speed 1/min Check

speed 1/min : < 325

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : 1200 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 123.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s.: +--6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 13.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 1250 Del. quantity

cm3/1000 strokes : 90.0 Tolerance

cm3/1000 strokes : +- 1.0 Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 11.70
Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance : +- 25.0 cm2/1000s.

LOW IDLE

Rated speed rpm : 460

Rack travel in mm : 5.40 Tolerance mm : \leftarrow 0.20 Del. quantity

cm3/1000 strokes : 13.5 Tolerance

cm3/1000 strokes : \leftarrow 3.0 Check tolerance : +-5.0

cm3/1000s.

Spreed
Tolerance
cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 913

Injection pump

Pump designation : PES6P120A120RS7369 EP type number : 0 412 726 935

Governor

Governer design. : RQV400...1400PA1211

: -1k Governer no. : 0 421 815 530

Cust. part No. : 3931538

Customer-spec. information Customer : CDC
Motor : 68TA-A
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Octside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : \leftarrow 0.50

Check

: **←** 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 180.0	+ Tolerance mm : +- 0.25 + Rated speed rpm : 512
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 3.37
Check tolerance	Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	Rated speed rpm : 1000 guide sleeve
Spreed	travel mm : 5.53 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 2130 guide sleeve
Check tolerance : 13.0	travel mm : 13.50 Tolerance mm: : + 0.50
Rated speed rpm : 435	FULL LOAD DELIVERY AT FULL LOAD STOP
	Rated speed rpm : 1300
Rack travel in mm : 5.80 Tolerance mm : + 0.20	+ Aneroid pressure + hPa : 1500
Del. quantity	+ hPa : 1500 + Del. quantity
cm3/1000 strokes : 13.0	+ cm3/1000 strokes : 180.0
Tolerance	Tolerance
cm3/1000 strokes : + 3.0	+ cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 5.0	+ Check tolerance + cm3/1000s. : +- 4.0
Spreed	Spreed
Tolerance	+ Tolerance
cm3/1000 strokes : 3.0	+ cm3/1000 strokes : 3.0
Check tolerance cm3/1000s. : 5.0	+ Check tolerance + cm3/1000s. : 13.0
CIID/ 1003	1
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
	+ control lever
GUIDE SLEEVE TRAVEL	position degree : 118.0 tolerance degree : +- 6.0
Rated speed rpm : 1410	toterance degree . *- 0.0
quide sleeve	+ RATED SPEED
travel mm : 8.73	+ rack travel mm : 13.40
Tolerance mm : + 0.25	Rated speed rpm : 1450 Tolerance 1/min : + 25
Rated speed rpm : 400	T roterance minim 25
guide steeve	rack travel mm : 5.50
travel mm : 2.01	+ Rated speed rpm : 1650
Tolerance mm : + 0.25	Tolerance 1/min : + 5
Rated speed rpm : 1488	rack travel mm : 0.50
guide steeve	Tolerance mm : + 0.50
travel mm : 9.53	+ Rated speed rpm : 1875
Tolerance mm : + 0.25	+:
Rated speed rpm : 462	‡
guide steeve travet man : 2.91	LOW IDLE
E1 0 7 0 6 10 11	,

M25

control lever position degree tolerance degree	: 68.0 : + 6.0
Control lever dif Grad tolerance degree	: 50.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 300
CRT man min.	: > 8.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 435 : 5.80 : + 0.20
Rated speed rpm	: 425
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1300 : 1500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1300 : - : 9.60 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 1300
Pressure hPa rack travel mm Tolerance mm	: 965 : 13.10 : + 0.30

Pressure hPa rack travel mm Tolerance mm	: 390 : 10.80 : + 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 340
Check speed 1/min	: > 80
Check speed 1/min	: < 350
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 118.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1300 : 79.5
STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 12.80 : ← 0.50
cm3/1000s.	: +- 25.0

LOW IDLE

435 Rated speed rpm 5.80 Rack travel in mm : ÷ ← 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance 5.0 cm3/1000s. : +-Spreed Tolerance 3.0 cm3/1000 strokes : Check tolerance 5.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.09.95 : ISO 4113

Combination No. : 0 402 776 818

Injection pump

Pump designation : PES6P120A720RS7382 EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100P0A547

: -5

Governer no.

: 0 421 833 481

Cust. part No. : RE62686

Customer-spec. information Customer : DEERE

Motor

: 6081 HF001

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temo. °C

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 Tolerance mm : **←** 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Start of delivery mark

*NW after s.o.d. : 9.75 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel 14.00

Difference * CS : 2.50

BASIC SETTING

Rated speed rpm :

1100

M28

+	
Rack travel in mm: 12.10 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 202.5	Rated speed rpm : 1100 Aneroid pressure
Tolerance cm3/1000 strokes : ← 1.0	hPa : 1300 Del. quantity cm3/1630 strokes : 202.5
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : 5.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	
 ‡	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 96.0
Rack travel in mm: 5.50 Tolerance mm: + 0.10	tolerance degree : +- 4.0 RATED SPEED
Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : + 3.0	rack travel mm : 11.10 Rated speed rpm : 1155 Tolerance 1/min : + 5
Check tolerance + 5.0 + 5.0	rack travel mm : 4.00
Spreed Tolerance +	Rated speed rpm : 1210 Tolerance 1/min : + 5
cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000s. : 12.0 +	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : 12.0 +	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : + 15
GUIDE SLEEVE POSITION	
control lever	LOW IDLE
position degree : -3 Rated speed rpm : 800	control lever
Rack travel in mm: 0.50	position degree : 73.0 tolerance degree : +- 4.0
Tolerance mm : + 0.20	Setting point w/out bumper spring
governor spring pre-tension click setting x : 4.00	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10

Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.50
Tolerance mm : + 0.10 TORQUE CONTROL 1100 Rated speed rpm : rack travel mm 12.10 Tolerance mm : **←** 0.05 700 Rated speed rpm rack travel mm : 12.85 Tolerance mm : **←** 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa 1300 500 Rated speed rpm Pressure hPa 9.35 rack travel mm Tolerance am : + 0.10**MEASUREMENT** Rated speed rpm : 500 Pressure hPa 900 12.00 rack travel mm : **←** 0.20 Tolerance mm : 450 : 10.20 Pressure hPa rack travel mm : : + 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1300 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 224.5 Tolerance cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 103.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : ← 25.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm: 5.50 Tolerance mm: \leftarrow 0.10 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 14.11.95 : ISO 4113

Combination No. : 0 402 776 820

Injection pump

Pump designation : PES6P12DA72DRS7382

EP type number

: D 412 726 943

Governor

Governer design. : RSV400...110CP0A547

Governer no.

: 0 421 833 488

Cust. part No. : RE62648

Customer-spec. information : DEERE Customer

Motor

: 6081 AF001

Power KW

: 205.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

REMARKS

x inside diameter :

x length mm :

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

3.60

3.0

600

Prestroke mm Tolerance mm

: + 0.05

Check

tolerance mm

: ← 0.10

Rack travel in mm : 10.50

: +- 1.50

Tolerance mm

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 Tolerance

: +- 0.50

Check

tolerance *NW

: + - 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference * CS :

2.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.70 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 191.5 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 191.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. 9.0	<pre>control lever position degree : 95.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 400	RATED SPEED rack travel mm : 10.70 Rated speed rpm : 1155
Rack travel in mm: 5.50 Tolerance mm: + 0.10	Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 20.5 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1210 Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1280
Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1225
cm3/1000s. : 12.0	Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOU TO F
	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 72.0 tolerance degree : +- 4.0
control lever position degree : - 3	Setting point w/out bumper spring
governor spring pre-tension click setting x : 3.50	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100	CRT mm min. : > 19.00
The control of the co	Testing:

Rated speed rpm	:	400
rack travel mm	:	5.50
Tolerance mm	: +-	0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack trayel mm : 11.70 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1300

Rated speed rpm : 500
Pressure hPa : rack travel mm : 8.70
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 74G rack travel mm : 11.10 Tolerance mm : + 0.20

Pressure hPa : 380 rack travel mm : 9.50 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 92.5
Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : \leftarrow 25.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 5.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 20.5
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 14.11.95 : ISO 4113

Combination No. : 0 402 776 825

Injection pump

Pump designation: PES6P120A720RS7382

EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100P0A574

: -?

Governer no.

: 0 421 833 496

Cust. part No. : RE63768

Customer-spec. information Customer : DEERE

: 6081 AF001 Motor

Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: ← 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter :

x length mm : 600

3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 : **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

14.00 travel

Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.70 Tolerance mm : +- 0.05	+ Aneroid pr + hPa + Del. quant
Del. quantity cm3/1000 strokes : 191.5	+ cm3/1000 s + Tolerance + cm3/1000 s + Check tole
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. Spreed Tolerance
Check tolerance cm3/1000s. : +- 4.0	- cm3/1000 s - Check tole - cm3/1000s
Spreed	
Tolerance cm3/1000 strokes : 5.0	CONTROL LE
Check tolerance cm3/1000s. : 9.0	control le position de tolerance
Rated speed rpm : 400	RATED SPEE - rack trave - Rated spee
Rack travel in mm : 5.50 Tolerance mm : + 0.10	Tolerance
Del. quantity cm3/1000 strokes : 20.5 Tolerance	+ rack trave + Rated spee + Tolerance
cm3/1000 strokes : → 3.0 Check tolerance cm3/1000s. : ← 5.0	rack trave
Spreed Tolerance cm3/1000 strokes : 8.0	Rated spee
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	+ rack trave + Rated spee + Tolerance
(B) SETTING OF INJECTION PUMP	‡
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control le
control lever position degree : - 3	Setting po
<pre>governor spring pre-tension click setting x : 3.50</pre>	Rated spec rack trave Tolerance
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated spee
Rated speed rpm : 1100	CRT mm mir
nated speed (Mill + 1100	Testing:

+++++++++++++++++++++++++++++++++++++++	Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1300 : 191.5 : ← 1.0 : ← 4.0 : 5.0 : 9.0
Ŧ	CONTROL LEVER	
+ + + + +	control lever position degree tolerance degree	: 95.0 : + 4.0
++++	RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 10.70 : 1155 : ← 5
+++++++++++++++++++++++++++++++++++++++	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1210 : + 5
+++++++++++++++++++++++++++++++++++++++	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1280
T + + + + + + + + + + + + + + + + + + +	rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1225 : + 15
†	LOW IDLE	

ever

degree : 72.0 e degree : + 4.0

point w/out bumper spring

: 400 ed rpm vel mm : 5.00 : + 0.10 e mm

eed rpm : 100

in. :> 19.00

Rated speed rpm	:	400
rack travel mm	:	5.50
Tolerance mm	: +	- 0.10

TORQUE	CONTROL
IONGUE	COMME

Rated speed rpm	:	1100
rack travel mm	:	11.70
Tolerance mm	; .	- C.C5

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1300

Rated speed rpm	:	5 00
Pressure hPa	:	****
rack travel mm	•	8.70
Tolerance mm	: +	-0.10

MEASUREMENT

Rated speed	rpm	:	500
-------------	-----	---	-----

Pressure hPa	:		740
rack travel mm	:		11.10
Tolerance mm	:	+-	0.20

Pressure hPa	:		380
rack travel mm	:		9.50
Tolerance ma	:	-;	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		92.5
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+	4.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	20.50
Tolerance mm	: +	- 0.50

Del. quantity cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : \leftarrow 25.0

LOW IDLE

0

Rack travel in mm	:		5.50
Tolerance nm	:	+-	0.10
Del. quantity			

cm3/1000 strokes : 20.5 Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s. : +- 5.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 12.09.95

Combination No. : 0 402 776 826

Injection pump

Pump designation : PES6P120A720RS7382 EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100POA547

Governer no.

: 0 421 833 498

Cust. part No. : RE63769

Customer-spec. information : DEERE Customer

: 6081 HF001 Motor

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 : +- 0.05 Tolerance mm

Check

: ← 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 9.75 : **←** 0.50 Tolerance

Check

tolerance *NW : **←** 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

travel 14.00 Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.10 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 202.5
Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 4.0
Spreed
Tolerance cm3/1000 strokes : 5.0
Check tolerance cm3/1000s. : 9.0
Rated speed rpm : 400
Rack travel in mm: 5.50 Tolerance mm: + 0.10 Del. quantity
cm3/1000 strokes : 20.5
Tolerance cm3/1000 strokes : +- 3.0
Check tolerance cm3/1000s. : ÷ 5.0
Spreed Tolerance
cm3/1000 strokes : 8.0
Check tolerance cm3/1000S. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR
GUIDE SLEEVE POSITION
control lever position degree : - 3
<pre>governor spring pre-tension click setting x : 4.00</pre>
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 1100

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1300 : 202.5 : + 1.0 : + 4.0
Tolerance cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 96.0 : 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.10 : 1155 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1210 : + 5
rack travel mm Tolerance mm Rated speed rom	: 0.85 : ← 0.55 : 1300
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1215 : +- 15

LOW IDLE

control lever

position degree : 73.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

400 Rated speed rpm : 5.00 rack travel mm : + 0.10 Tolerance mm

Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

Rated speed rpm	: 400
rack travel mm Tolerance mm	: 5.50 : +- 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.10 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.85 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1300
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.35 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 900 : 12.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 10.20 : ← 0.05
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 700
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 3.0 : ← 6.0
Aneroid pressure	

	: 500
Del. quantity cm3/1000 strokes Tolerance	: 103.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	.IVERY
Rated speed rpm rack travel mm	: 100 : 20.50
Tolerance mm Del. quantity	: +- 0.50
cm3/1000 strokes Tolerance	: 105.0
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: +- 25.0
LOW IDLE	
Rated speed rpm	: 400
Rack travel in mm	n: 5.50
Tolerance mm Del. quantity	: +- 0.10
cm3/1000 strokes Tolerance	: 20.5
cm3/1000 strokes	: +- 3.0

End of test specification sheet

Check tolerance cm3/1000s. : +-

Check tolerance

cm3/1000s.

cm3/1000 strokes : 8.0

Spreed Tolerance 5.0

12.0

:

hPa

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.01.96 : ISO 4113

Combination No. : 0 402 776 827

Injection pump

Pump designation : PES6P120A720RS7399

EP type number : 0 412 726 951

Governor

Governer design. : RSV475...1000POA547

: -9

Governer no. : 0 421 833 506

Cust. part No. : RE65507

Customer-spec. information Customer : DEERE

: 6101 AT010 Motor Power KW : 221.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C : + 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x inside diameter: 3.0 x length mm : 600

per values _____

REMARKS

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mn: + 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.00 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.45

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 235.5

t.	No.
Tolerance	Del. quantity cm3/1000 strokes : 235.5
cm3/1000 strokes : + 1.0	Tolerance
+	cm3/1000 strokes : + 1.0
Check tolerance +	Check tolerance
cm3/1000s. : +- 4.0 +	cm3/1000s. : +- 4.0
Connect	Spreed
Spreed	Tolerance cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : 9.0	CONTROL I CUCO
	CONTROL LEVER
I	control lever
Rated speed rpm : 525	position degree : 90.0
1	tolerance degree : +- 4.0
Rack travel in mm: 5.60	
Tolerance mm : +- 0.10	RATED SPEED
Del. quantity +	rack travel mm : 12.40
cm3/1000 strokes : 21.5 +	Rated speed rpm : 1060
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 +	
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 5.0	Rated speed rpm : 1125
Spreed	Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 8.0 +	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1600s. : 12.0 +	Rated speed rpm : 1200
(115) (1005).	
↓	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1145
WITH GOVERNOR +	Tolerance 1/min : + 15
+	
+	
CURA TO A PERIOD DOCUTION	
GUIDE SLEEVE POSITION	LOW IDLE
I	LOW IDEE
control lever	
position degree : - 3	control lever
Rated speed rpm : 800	position degree : 74.0
+	tolerance degree : +- 4.0
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	Setting point w/out bumper spring
+	
governor spring +	Rated speed rpm : 525
pre-tension +	rack travel mm : 5.10
click setting x : 3.25	Tolerance mm : +- 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
TOLL FOUND REFLICITLY AT TOLL FOUND STOL	CRT mm min. : > 19.00
Rated speed rpm : 1000	
Aneroid pressure	Testing:
hPa : 1600 +	
+	Rated speed rpm : 525

rack travel mm : 5.60 Tolerance mm : + 0.10 TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 13.45 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1600

Rated speed rpm : 500 Pressure hPa : - 9.75
rack travel mm : 9.75
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 1000 rack travel mm : 12.40 Tolerance mm : + 0.20

Pressure hPa : 590 rack travel mm : 10.60 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 101.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity Ċ.

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 525

Rack travel in mm: 5.60 Tolerance mm : \leftarrow 0.10 Del. quantity

cm3/1000 strokes : 21.5

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance cm3/1000s. : + 5.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.04.96 : ISO 4113

Combination No. : 0 402 776 828

Injection pump

Pump designation : PES6P120A720RS7403

EP type number : 0 412 726 952

Governor

Governer design. : RSV400...1050P0A547

: -10

Governer no.

: 0 421 833 507

Cust. part No. : RE64818

Customer

Customer-spec. information

: DEERE

Motor

: 6101 HF001

Power KW

: 280.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : ← 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

N15

x inside diameter: 3.0 x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : + 1.0

Prestroke mm

: 3.60

: +- 0.05 Tolerance mm

Check

tolerance imm : + 0.10

Rack travel in mm: 10.50

Tolerance m_{ii} : \leftarrow 1.50

Firing order

: 1-5- 3-6-2-

Phasing

: 0-60-120-180-240

: -30C

Start of delivery mark

*NW after s.o.d. : 9.50

Tolerance

: + 0.50

Check

tolerance *NW

: **←** 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference * CS : 3.75

BASIC SETTING

Rated speed rpm : 1050

+	Aneroid pressure
Rack travel in mm: 13.65 Tolerance mm: + 0.05	hPa : 1800
	Del. quantity cm3/1000 strokes : 247.0
Del. quantity + cm3/1000 strokes : 247.0 +	Tolerance cm3/1000 strokes : +- 1.0
Talanana	Check tolerance cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : + 1.0	Spreed Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance	
cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 92.0
	tolerance degree : + 4.0
Ţ	RATED SPEED
Rated speed rpm : 400	rack travel mm : 12.65
Pool anguel in many 4 00	Rated speed rpm : 1100 Tolerance 1/min : +- 5
Rack travel in mm: 6.00 + Tolerance mm: + 0.10 +	
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 30.0	Rated speed rpm : 1165 Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 +	roterance minn 3
Check tolerance	rack travel mm : 0.85
cm3/1000s. : +- 5.0	Tolerance mm : + 0.55
Spreed	Rated speed rpm : 1250
Tolerance + cm3/1000 strokes : 8.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1175
cm3/1000s. : 12.0	Tolerance 1/min : + 15
Ţ	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION +	control lever
†	position degree : 71.0 tolerance degree : +- 4.0
control lever	toterance degree . +- 4.0
position degree : -3	Setting point w/out bumper spring
governor spring	Rated speed rpm : 400
pre-tension +	rack travel mm : 5.50
click setting x : 3.25	Tolerance mm : ← 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
	CRT mm min. : > 19.00
Rated speed rpm : 1050	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 400 : 6.00 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.10 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1800
Rated speed rom Pressure hPa rack travel mm Tolerence mm	: 500 : - : 9.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 1110 : 12.95 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 610 : 10.65 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1800 : 800
cm3/1000 strokes Tolerance	: 272.0
cm3/1000 strokes Check tolerance cm3/1000s.	: + 3.0 : + 6.0
Aneroid pressure hPa	: -

Rated speed rpm	:	500	
Del. quantity cm3/1000 strokes	:	109.5	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.0	
OTANTANO FUEL ASI			
STARTING FUEL DEL	IVERY		
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: +-	100 21.00 0.50	
cm3/1000 strokes Tolerance	:	105.0	
cm3/1000 strokes	: +-	20.0	
Check tolerance cm3/1000s.	: -}	25.0	
LOW IDLE			
Rated speed rpm	;	400	
Rack travel in mm Tolerance mm Del. quantity	: +-	6.00 0.10	
cm3/1000 strokes Tolerance	:	30.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s.	: +-	5.0	
Spreed			
Spreed Tolerance cm3/1000 strokes	•	8.0	
Tolerance	:	8.0 12.0	
Tolerance cm3/1000 strokes Check tolerance	•		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.08.97 Test oil : ISO 4113

Combination No. : 0 402 796 206

Injection pump

Pump designation : PES6H120/720RS1007

: -1

EP type number : 0 412 726 209

Governor

Governer design. : RE33

Governer no. : 0 421 890 366

Cust. part No. : 309 4348

Customer—spec. information Customer : CUMMINS Motor : QST30 Power KW : 783.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump—specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke imm : 7.60
Tolerance mm : + 0.05
Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Prestroke mm : 9.95
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1:

Setting point (P, R and H pump)

: Uact V 3,100 13.00 CRT num Tolerance mm : +/- 0.05

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

1.700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Check

: +/- 0.30 tolerance mm

Setting point (M pump)

3.100 Uact V CRT mm 12.50 Tolerance mm : +/- 0.05 Check

: +/- 0.10 tolerance mm

Check value (M pump)

1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25

Check

: +/- 0.30 tolerance mm

Stop position

: Value with Uact V

deenergised adjusting magnet and control rod in

stop position.

: 0.75 CRT mm : +/- 0.25 Tolerance mm

Check

: +/- 0.35tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6

Check

: +/- 1.20 tolerance V

Engine speed min-1: 600

Difference Amplitude to

: max.1.4 Amplitude V

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 1050 Uact V 3.315 Del. quantity

cm3/1000 strokes : 358.0

Tolerance

cm3/1000 strokes : +-

Check tolerance : +-4.0

cm3/1000s. Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 9.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 750

Uact V Del. quantity

cm3/1000 strokes : 386.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s.

: +- 6.0

3.350

TEST POINT L1

300 Rated speed rpm Uact V 1.400 Tolerance Volt : +- 0.060 Check tolerance

Volt : +- 0.060

Del. quantity

cm3/1000 strokes : 38.0

Tolerance

cm3/1000 strokes : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm 100 Uact V : Del. quantity cm3/1000 strokes : 2.450

255.0

Check tolerance

cm3/1000s. : +- 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.C8.97 Test oil : ISO 4113

Combination No. : 0 402 796 207

Injection pump

Pump designation : PES6H120/320RS1008

: -1

EP type number : 0 412 726 208

Governor

Governer design. : RE33

Governer no. : 0 421 890 367

Cust. part No. : 309 4347

Customer—spec. information Customer : CUMMINS Motor : QST30 Power KW : 783.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. $^{\circ}$ C :

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values

in Section (B)
must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 7.60
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Prestroke mm : 9.95 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 25.00

Tolerance : +- 0.50 Check : + - 0.75tolerance 'NW Barrel no. : 1 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: 0 Setting point (P, R and H pump) 3,100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) Uact V 1.700 CRT mm 6.15 : +/- 0.25Tolerance mm Check : +/- 0.30 tolerance mm Setting point (M pump) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (M pump) Uact V 1.700 5.50 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30Stop position

: Value with

deenergised adjusting magnet and control rod in stop position.

0.75 CRT mm Tolerance mm : +/- 0.25

Check

: +/- 0.35 tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm 1050 3.315 Uact V

Del. quantity

cm3/1000 strokes : 358.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.9.0 FUEL DELIVERY CHARACTERISTICS

750 Rated speed rpm Uact V 3.350

Del. quantity

cm3/1000 strokes : 386.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s.: +--6.0

TEST POINT L1

Uact V

Rated speed rpm	:		300
Uact V	:		1.400
Tolerance Volt	:	+-	0.060
Check tolerance			
Volt	:	+-	0.060
Del. quantity			
cm3/1000 strokes	:		38.0
Tolerance			
cm3/1000 strokes	:	+	3.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.			12.0
CILDY TOOCS.	•		12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 2.450
Del. quantity
cm3/1000 strokes : 255.0
Check tolerance
cm3/1000s. : + 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 812

Injection pump

Pump designation : PES6P129A720RS7315

EP type number : 0 412 726 902

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 57373

Customer—spec. information Customer : DEERE Motor : 6081

Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.
Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

(B) POSITIONER TESTING
Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1: 0

Setting point (P, R and H pump)

Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05

Check

tolerance mm : ± -0.10

Check value (P, R and H pump)

Uact V : 1.700

CRT mm : 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30					
Setting point (M pump)					
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10					
Check value (M. pump)					
Uact V : 1.700 CRT mm : 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30					
Stop position					
Uact V : Value with deenergised adjusting magnet and control rod in stop position. CRT mm : 0.75					
Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35					
ENGINE-SPEED SENSOR (ALL P and R pumps not H and M pumps)					
Test with control rod in stop position					
Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20					
Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4					
(c) THECTION DUMP LITTU DOCTTIVNED					

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heck tolerance		: +	- 20.0
	Check tolerance	•	
	cm3/1000s.	: +	- 25.0
		: +	- 25.0

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25,07,97 : ISO 4113

Combination No. : 0 402 796 817

Injection pump

Pump designation : FES6P120A720RS7405

EP type number

: 0 412 726 954

Governor

Governer design. : RE30

Governer no. : 0 421 890 037

Cust. part No. : RE 64862

Customer-spec. information

Customer

: DEERE

Motor

: 6101AF001

Power KW : 242.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 2 417 413 077

Inlet press. bar :

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 089

Outside diameter :

8.0

x length mm :

x inside diameter :

3.0 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

: 3.60 Prestroke mm : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : ← 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance

: **←** 0.50

Check

: +- 0.75 tolerance *NW

Start of delivery mark

*NW after s.o.d. : 7.50 Tolerance

Check

: **←** 0.50

tolerance 'NW

: +- 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

: 15.00

Difference * CS : 2.50 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V 13.00 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm

Check value (P, R and H pump)

: 1.700 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm

Setting point (M pump)

3,100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10

Check value (M pump)

tolerance mm

1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check

: +/- 0.30 tolerance mm

Stop position

: Value with Uact V deenergised adjusting magnet

and control rod in stop position.

0.75 CRT mm

Tolerance mm : +/- 0.25 Check : +/- 0.35 tolerance mm

ENGINE-SPEED SENSOR (ALL P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V 1.4 : +/- 0.6 Tolerance V Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

1050 Rated speed rpm : 3.030 Uact V

Del. quantity

cm3/1000 strokes : 213.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000S. 9.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 700 Uact V 3.120

Del. quantity

cm3/1000 strokes : 237.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +-6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

TEST POINT L1

Rated speed rpm 450 1.740 Uact V Tolerance Volt : **←** 0.060 Check tolerance Volt : + 0.060 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Usct V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000S. : + 25.0